A STUDY ON

URATHA PITHAM

(HYPERTENSION)

WITH THE EVALUATION OF SIDDHA DRUG

PUDHINA THEENEER

The dissertation submitted by

Dr.P.KAVITHA(32091104)

Under the guidance of

Prof.Dr.N.ANBU,M.D.(S)

Submitted to

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY

In partial fulfilment of the requirements

For the award of the degree of

SIDDHA MARUTHUVA PERARIGNAR

DOCTER OF MEDICINE(SIDDHA)

BRANCH I-MARUTHUVAM

POST GRADUATE DEPARTMENT OF MARUTHUVAM

THE GOVERNMENT SIDDHA MEDICAL COLLEGE

CHENNAI-106

OCTOBER-2017

CERTIFICATE

This is to certify that the dissertation entitled "**A STUDY ON URATHA PITHAM"** is a bonafide work done by **Dr. P.KAVITHA**, Government Siddha Medical College, Chennai – 600 106 in partial fulfilment of the University rules and regulations for award of **SIDDHA MARUTHUVA PERARIGNAR** under my guidance and supervision during the academic year 2014 – 2017.

Name & Signature of the Guide

Name & Signature of the Head of Department

Name & Signature of the Dean / Principal

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INTRODUCTION

INTRODUCTION

"***Siddha system of medicine***" is a form of a traditional medicine system which originated down south.Siddha means achievment, which was attained by siddhars. They were saints who were mystics and are credited for developing and forwarding the system of Siddha medicine.It is believed that there were eighteen Siddhars in total, who are also referred to as the enlightened souls.

The Siddha system is largely therapeutic in nature and its origin can be traced back to the birth of human race on the planet.According to mythological and historical beliefs,the initial home of mankind was located in the temperate and fertile regions of the east.The human race started its culture and career from here.

Moreover this wondrous land was primarily inhabited by the ***Dravidians*** of whom the ***Tamilians*** where the most prominent.They were also accredited for being one of the most developed civilizations which ever dwelled upon this planet.

Dravidian language was predominent in southa. Siddha was flourishing in the south owing to its antiquity, the origin of this system is attributed to the creator himself as per traditional tales,it is deamed that lord Shiva unfolded the knowledge about Siddha Neverthless, saint Agasthiyar is accredited for founding the Siddha system of medicine. His works on medicine and surgery, still serve as standards among Siddha medical parctitioners.

According to the ancient Siddha texts, a human body is made up of several elements. It is a microscopic component of the universe. The elements that form a human body are the earth (Munn), fire (Akasam), Additionally there are three HUMORS called the Vatham pitham and kabam. Siddha medicine believes that diseases occur when there is a disequilibrium or imbalance in these humors or if their individual hormony is disturbed.

Pitha diseases occurs when Pitham gets dearanged due to the activities of humans and it exposed with burning sensations, aggressiveness, and fatigue.

According to "YUGI VAIDHYA CHINATHA MANI – 800" Diseases of Pitham are classififed into 42 types. This classification provides symptoms of "Uratha pitham" more or less similar to Hypertension.

Drug Name: "*Pudhina theeneer*".

Reference: ***Sigicharathnadeepam***

The drug ***Pudhina theeneer*** relieve the symptoms of giddiness, tiredness and reduction in High blood pressure and cholesterol.

The balance can be restored by correcting the underlying dosha by the application of the Siddha medicine system.

The three humors co-exist in all the cells of the body. They function in a harmonious manner to create a balance.

The three humors are considered the three pillars of health and support the structure and functions of the body. These humors are involved in regulating all the functions of the body, and maintain the balance in the physical emotional and mental spheres.

Hypertension is the commonest cardiovascular disorder, posing a major public health challenge to population in socioeconomic and epidemiological transtition. It is one of the major risk factor for cardiovascular mortality, which accounts are 20-50% of all deaths.

Globally the overaall prevalence of raised blood pressure in adult aged 25 and over was around 40% in 2008.

The proportion of the worlds population with high blood pressure or uncontrolled hypertension fell modestly between 1980 and 2008. However because of population growth and ageing the number of people with uncontrolled hypertension rose from 600 million in 1980 to nearly 1 billion in 2008.

Across the income groups of countires, the prevalence of raised blood pressure was consistently high, with low, lower middle and upper middle countries all having rates of around 40% the prevalence in high income countries was lower, at 35%.

I have choosen "Pudhina theeneer" as my dissertation work for uratha pitham which correlates with hypertension as described in the modern medical system.

"Pudhina theeneer" will be an effective as well as Safety herbal drug in the treatment of Hypertension.

AIM AND OBJECTIVES

AIM AND OBJECTIVE

AIM:

The purpose of this study is evaluate the safety and efficacy of Siddha herbal formulation of "PUDHINA THEENEER" in the treatment of Uratha pitham.

OBJECTIVES:

- Collections of various Siddha literature of the study.
- Herbal Identification and authentication of the trial drug.
- To prepare the trial drug "PUDHINA THEENEER"as per standard operative procedures drug preparation.
- To evaluate the Biochemical,Anti-microbial&physio-chemical analysis of the drug.
- To evaluate the safety profile like acute toxicity,sub acute toxicity of the trial in animal models as per OECD guidelines.
- To evaluate the pharmacological analysis of ANTI HYPERTENSIVE ACTIVITY for my trial drug.
- To correlate the Siddha diagnostic parameters by Mukkutram,Udalthathukkal,Uyirthathukkal and Envagai thervugal.
- To use modern parameters to confirm the diagnosis and prognosis of the disease.
- To make a clinical observation about the disease in relation of age, sex, occupation, social economic status, diet ,and family history.
- The haematological analysis,urine analysis,radiological studies will be done to all patients.
- To find out the statistical analysis and efficacy of the trail drug through clinical study.

REVIEW

OF

LITERATURE

SIDDHA ASPECT

REVIEW OF LITERATURE

SIDDHA ASPECTS:

According to Yugi Vaidhya Chinthamani.

மகிழ்ந்துமே பித்தந்தான் வருகும் வாறு
மசதேவர்தமைப்பணியமாட்டாதார்க்கும்
மகிழ்ந்துமேகுருவடியைவணங்காதார்க்கும்
மாதாவின் மனமகிழாமார்க்கத் தார்க்கும்
மகிழ்ந்துரிவதிரவியத்தையபகரித் தோர்க்கும்
மாபாதகர்க்குவந்துமருவும் பாரே
மருவுமேபுளிப்புஉரைப்புலப்புமிஞ்சல்
மனதிலேதுக்கங்களடைதலாலு
நெருவுமேநெருப்புவெய்யில் கோபந் தன்னில்
நித்திரைதானில்லானால் விருத்திருக்கில்
அருவுமேஅக்கினியிற் பொசிக்கவிட்டால்
அதிகமாய்ப் பெண்போகமனுபவித்த
நருவுமேநாடிக்கும் மேலேநின்று
நாடியேகண்டமட்டாயிருக்கும் பாரே

- **Yugi vaithya chinthamani**[10]

- Persons do not pay respect to God.
- Persons who do not give due respect to guru.
- Persons who do not respect to Mother.
- High intake of sour and salt foods.
- Having mourning in mind.
- Walking in sunlight and heat.
- Insomnia.
- Excessive indulgence in sex.

The disease taken here is ‘Uratha Pitham’ is mentioned under Yugimuni’s classification of Pitha diseases. Disease of pitham are of 42 types in his classification.

Pitha Noigal:-

Other Name :- Azhal Noigal.

Definition:-

Pitha diseases occurs when Pitham gets deranged due to the activities of humans and it exposed with burning sensations, aggressiveness, difficulties in conversion processes of the body and Imbalance in the energy and heat producing capacities.

Classification of pitha diseases:-

According to Yugi vaidhya chinthamani.

Diseases of Pitham are classification into 42 type. This classification provides Symptoms of Urathapitham more or less similar to Hypertension.

Quote Says.

"நாட்டினேன் பித்தத்தின் பெயரைத்தானும்
நாற்பத்திரண்டானகுணாகுணங்கள்"

- Yugimuni Vaithya chinthamani.[6]

According to Pararasasekaram.

The Pitha diseases are classified upto 40 types in **Pararasekaram.**

"வற்றிடுங் காசபித்தமோதியவாதபித்தம்
கொற்றிடும் வறட்சிபித்தந் துயருறுசுழற்றுபித்தம்
செற்றிடுஞ் சத்திபித்தஞ் சேற்பனபித்தந் தேகம்
வற்றிடுமுலர்ந்துபித்தம் வசமறப் பிதற்றும் பித்தம்
பித்தமாயெடுக்கும் பித்தம் தேதித்துநடுக்கும் பித்தம்
சத்தமாமவுனபித்தந் துயருறவோடும் பித்தம்
சத்தமார்கடியபித்தஞ் சாற்றியவாயுப் பித்தம்
சித்தமாயுறங்கும் பித்தம் செம்பித்தஞ் சீதபித்தம்
பேதமாயலட்டும் பித்தம் பெருத்துவாயூறும் பித்தம்
ஏதமாயேறும் பித்தயிலங்குந் தரத்திற் பித்தம்
கபால மார் பூதபித்தம் பரும்பித்த முரோகபித்தம்
அபாயமார்ரதிகபித்தமடும்பித்தமரோசிபித்தம்

ஒருதனிவிடாதபித்தமோதிடும் விசரின் பித்தம்
தருமவிகாயபித்தஞ் சார்சயித்தியத்தின் பித்தம்
உனருமிகு மந்த பித்தமோதின மினிமேலிப்பால்
வருமதின் குணமுஞ் செய்யவிகுத்திடு மருந்துஞ் சொல்வோம்''

- **Pararasasekaram** [11]

According to sadhagaNaadi.

உறுதியுள்ளபித்தமதுதோன்றில் வெப்பு
உ'ணவாயுவத்திரசுரமதிசாரங்கள்
மறதியுடன் கிறுகிறுப்புபயித்தியரோகம்
வளர்சோகையழலெரிவுகாந்தல் கைப்பு
இருதயத்தில் கலக்கமதுமறப்புதாகம்
எழுங்கனவுமேயனைவுமயக்க மூர்ச்சை
சிறிதுபெரும் பாடுரத்தம் பிரமேகங்கள்
சேர்ந்துமிகுபிணிபலவுஞ் சிறக்குந் தானே.

- Noi naadal noi muthal naadal thiratu[12]

This verse says.

- Diarrhoea
- Heat, Fever
- Loss of Memory
- Giddiness
- Fatigue
- Anaemia
- Burning sensation
- Bitter in taste
- Hallucination
- Mild menorrhagia
- Discharge of fluid with blood
- Palpitation

According to Danvandhiri Vaidhiyam.

"அகாலநித்திரையினாலும் அதிசங்கமோகத்தாலும்
தகாதவெம் பசியினாலும் தருவிடமேற்கையாலும்
பகாதவன் கிமலசத்தலும் பயித்தியபதார்த்தத்தாலும்
சிகரதாங் கல்கையாலுந்தசேர்ந்திடும் பித்தந் தானே"

"இருமலமடக் கையாலும் மொருமலமிழைக் கையாலும்
வரும் வெயில் பெருக்கையாலுமனமுறுகோபத்தாலுஞ்
சுரமதுதரிக்கையாலுஞ் சுடுபிணநாற்றத்தாலுந்
திரவியங் கெடு கையாலுஞ் சேர்ந்திடும் பித்தந் தானே"

- **Danvadhiri vaidhiyam**[18]

This Verse, Says

- Irregular sleeping habit
- Increased appetitate
- Lust on women
- Excessive intake of foods that increase pitham
- By the ill effects of sun's rays
- Angry
- Fever
- Not properly intake of drug(Diraviyam).

According to pararasasekaram,

"வெய்யிலிடைக்கையாலும் வெம்பசிமிகுத்தலாலும்
துய்யதோல் ரலுரெய் யான்பால் துய்த்தலைவிடுத்தலாலும்
நையவேவருங்கோபத்தைநண்ணெயாற் கசப்பைநாளும்
கையுறஉண்ணலாலுங் கதித்திடும் பித்ததோ'ம்"

"பித்தத்தைவிளைக்குமென்றுபேசியவுணவைநாளும்
மேத்தவேயருந்தலாலுமிகுந்திடும் துயரத் தாலும்
நித்தரையிலாமை யாலு நினைவுகண் மிகுத்தலாலும்
மற்றுளவேதுவாலும் வாத்திக்கும் பித்ததோ'ம்"

-**Pararasasekaram**[14]

This verse says the aetiological factors that, lead to Pitha diseases.

These are

- Walking in sunlight
- Excessive appetite
- Avoiding intake of milk and ghee
- Increasing anger
- Excessive intake of sour foods
- High intake of food which increase pitham
- Loss of sleep

PITHAM

Pitham is one among the three humours, VIZ Vatham, pitham and kabam. These three humours are together known as "Muthathukkal"

"நிலம் நீர்தீவளிவிசும்போடைந்தும்
கலந்தமயக் கமுலகம் ஆதலின;"

-**Sadhaga naadi Noi naadal noi muthal naadal**[15]

"தலங்காட்டி இந்தச் சடமானவைம்பூதம்
நிலங்காட்டி நீர்காட்டி நின்றிடுற் தீ காட்டி
வலங்காட்டிவாயுவால் வளர்ந்தே இருந்த
குலங்காட்டிவானிற் குடியாயிருந்ததோ"

- **Noi naadal noi mudhal naadal**[32]

The above said five elements called as "Pancha Boodham" are,

Prithivi - Earth

Appu - Water

Theyu - Fire

Vayu - Air

Aahayam - Space.

Thus Vayu and Aahayam combine to become vatha uyir thathu, which controls all aspects of movements. The words dry, light, cold, quick, rough minute and mobile describe the characteristics fo 'Vatha Yuir thathu.

Theyu alone becomes Pitha uyir thathu which controls all the body's conversion processes, produce heat and energy producing capacities. The words hot, pungent, aggressive, Liquid, mobile and acid describe the characteristics, of Pitha uyir thathu.

Appu supported by Prithivi becomes Kabha uyir thathu and controls lubrication and cohesion. It is also responsible for giving solidity and structure to the body. Kabha Uyirthathu primarily reflects the qualities of the water but also some traits of the earth element, consequently kabha is heavy, slow, cold, steady, solid and oily.

FORMATION OF MUTHODAM

ஆகமது நாடி நரம்பு யெழுபத்தீராயிம்

இருப்பா நாடி ஏழுப தேரோ

யிரமான தேகத்தில் கலப்பே நாடி

ஏக்கச் சமத் தொழில் ஊக்க சகவாயு

தக்க நாடி என்றே சாடு

-Yugi Vaidhya Chindhamani[44]

இருப்பான நாடி ஏழுபதோடீரா

யிரமான தேகததில் ஏலப் பெருநாடி

ஒக்கதசமத் தொழிலை ஊக்க தச வாயுக்கள்

தக்கபடி என்றே சாரும்

சாருந்தச நாடி தன்னில் மூலம் மூன்று

பேருமிடம் பிங்கலையும் பின்னலுடன் - மாறும்

உரைக்கவிரற் காற்றொட்டுனத்துமே நாசி

வரைச சுழியோ மையத்தில்

வந்து கலை மூன்றில் வாயுவாம பானனுடன்

தந்த பிராணன் சமானனுக்குஞ் சந்தமறக்

கூட்டுறவு ரேகித்தல் உறும் வாதம் பித்தம்

நாட்டுங் கபமேயாம் நாடு''

-Kannusamiyam[43]

According to this verse the human body is composed of 72,000 Naadi narambugal

Among this 72,000 Naadies ten are prominent Naadies (Dasa Naadies). Of these ten Naadies 3 are known as Moolathara Naadies

These are

1. Edagalai
2. Pingalai
3. Suzhumunai

Ten Vayus present in the body are

1. Piranan
2. Abhaanan
3. Udhanan
4. Viyanan
5. Samanan
6. Nagan
7. Koorman
8. Kirugaran
9. Devathathan
10. Thananjeyan

Among these Abhaanan conjugates with Edagalai to form ‘Vatham’

Piranan conjugates with Pingalai to form ‘Pitham’

Samanan conjugates with Suzhumunai to form ‘Kabam’

These three humours Vatha, Pitha and Kabha are more or less correlated with excreta, Gastric juice, and saliva respectively

They circulate in the body system in different proportions and help in the digestion of food and other general physiological functions of the body. Each of them has different functions.

The right proportion of each in proper combination are responsible for maintaining the good health.

When some of the environmental factors like diet, weather etc., disturb Pitha, it looses its control, which may be diminished or exaggerated. So the other two Uyir thathus are also disturbed which are in peculiar equilibrium state. Finally this may leads to Pitha diseases.

Natural Characteristics of Pitham

Locations

Generally Pitham lives in

1. Piranan
2. Pingalai
3. Head
4. Heart
5. Blood
6. Stomach
7. Urinary bladder
8. Sweat
9. Eye
10. Skin
11. Umblicus
12. Saliva

According to THIRUMOOLAR

பிரிந்திடும் பித்தம் ரோஞ்சலத்தினில்

means pitha lives in urine

According to Yugi muni

போமென்ற பித்தத்துக் கிருப்பிடமே கேளாய்

பேரான கண்டத்தின் கீழதாகும்

It means, place of the 'Pitham' in body is below the neck.

NATURAL PROPERTIES

Pitham in its natural habit may cause

- Digestion
- Hunger or Hungry (Poly phagia)
- Taste
- Thirst
- Vision
- Light
- Concentration
- Knowledge
- Softness
- Warm
- Hardness
- Heat Production in the body
- Bluish colour formation
- Production of heat during digestion
- Memory power

After having said so much about the description of Dathu and"Thiridathu" or "Thiridosham" according to Siddha system of Medicine.

Here, Pitham is the third one relocated to fire,

Fire makes the form of the body steady and gives vigour and stimulation. Digestion and circulation represent it in the body.

Like here Vatha, Pitha and Kapha, have multiple significance and are symbolical in terms.

Pitham represents gastric juice, bile, energy, heat, inflammation, anger and irritation etc.,

Here the description is anatomical and physiotopical and each has been described in five forms with five functions.

Five forms of Pitha.

- Gastric juice (Analaga pitham) – This give appetite and helps digestion.
- Bile (Prasagam) – which gives completion to the skin.
- Haemoglobin (Ranjagam) – which colours the blood.
- Aqueoces Humour (Alosagam) – which brightens the eyes.
- Life energy (Sadhagapitham) – which controls the whole body.

Qualities of Pitham

Own qualities.

Akkini - Hot

Pulippu - Acidity

Odum thanmai- Mobility

Salaroopam - Liquidity

Kaaram - Pungent

Kurooram - Agressiveness

Opposite qualities

Kulirchi - Cold

Inippu - Sweet

Nilaithiruthal - Immobility

Kasappu - Bitter

Saantham - Mild or Harmless.

Getti - Solidity.

From this to

Natural characteristics of Pitham Locations

Generally, Pitham lives in

- Piranan
- Pingalai
- Head
- Heart
- Blood

Hyper Pitha - Signs

- Yellowish discolouration of eye, skin urine and motion
- Poly phagia and poly dypsia
- Burning sensation all over the body
- Sweating
- Giddiness
- Haemorrhage
- Angry
- Immovable
- Emaciation
- All taste to be like sour or bitter

Hypo Pitha - Signs

- Cold
- Decrease in colour
- Disturbance in natural growth of Iyam
- Less heat

Characterestics Pitha Thegi - Natural

Physical characters

- The person has high thee thoda
- The muscle content can be less beyond the bones and joints
- Body may appear always with heat, sweating and with unpleasent smell
- Wrinkled skin
- Colour of the skin can be yellowish red with shining
- Face, palm and sole are reddish yellow in colour
- Thin eyelids
- Reddish discoluration of eyes due to heat, anger and hungry.
- Slighly yellowish hair
- Fewer hair in the body and grey
- Black moles with pimples
- More heat in the body
- Yellow or red colur of the body
- Reddishness in upper and Lower limbs
- Lesser hair in body
- Giddiness

Behavioural characters

- Willing to take sweet, Astringent, Bitter and cold foods
- Lesser intake of food
- Intolerence to appetite, thirst, heat, angry and fear
- Willing to be garlanded
- Oligospermia

- Low kaamam
- Reduced lust
- Hatefullness, respect, courge, clear knowledge, talkative, good habits, discipline and love with others
- In dream there will be sun, wind, light of fire, lightening and kongu tree with flowers, caeasalpenia tree (Sarakkondrai) Murukkan tree are found
- Happier and has good eduction
- Age will be 65 years and has 3/4 vitality
- Higher appetite
- Intolerence to thirst
- Courage
- Good knowledge
- More appetitate

Pitha thega kuri

அறிவான பித்தத்தாலெடுத்த தேகம்

யறமெலிவு நிறம் வெள்ளை யரிவையோடு

பிரியாத சுகலீலையற்ப வுண்டி

பெரும்புளிப் புணவு கொள்ளல் பெரியோர் தம்மை

குறியாத வாசாரம் பண்ணல் புத்தி

குழம்பிப் பின் தேறல் கலைக் ஞான போதம்

நெறியாகக் கற்றறிவு சொல்லல் வீரம்

நிலைப்பு மதியில் க்கமதி யறவமாமே

-Noi Naadal noi mudhal naadal[15]

According to this verse, the natural characteristics of Pitha thegi are

- Emaciation
- White coloured skin

- Low intake of food
- Willing to take sour taste foods
- Confused minds
- Interest in Arts
- Respect to elders
- Intelligency
- Courage
- Excessive lust

Place and function of Pitham

தானான பித்தம் பிங்கலையைப் பற்றிச்
சாய்வான பிராண வாயுவு தன்னைச் செர்ந்து
ஊனான நீர்ப்பையில் அணுகி மூலத்
துதித்தெழுந்த வக்கினியை உறவு செய்து
மானே கேளிருதயத்திலிருப்பு மாகி
மயலாகி நினைவாகி மயக்கமாகி
கானான சிரந்தனிலே இரக்கமாகிக்
கொண்டு நின்ற பித்தநிலை கூறினோமே

-Noinaadal Noi Mudhal Naadal[23]

According to this verse, Pitham is associated with Piranan and Pingalai, goes to urinary bladder and mix with Seevakkini to lives in heart and head.

SYMPTOMS DUE TO EXCESS IN PITHAM

உறுதியுள்ள பித்தமது தோன்றில் வெப்பு
உட்ணவாயுவத்தி சுரமதி சாராங்கள்
மறதியுடன் கிறுகிறுப்பு பயித்திய ரோகம்
வளர் சோகை யழலெரிவு காந்தல் கைப்பு

இருதயத்தில் கலக்கமது மறப்பு தாகம்

எழுங்கனவு மேயனைவு மயக்க மூர்ச்சை

சிறிது பெரும்பாடு ரத்தம் பிரமேகங்கள்

சேர்ந்து மிகு பிணி பலவுஞ் சிறக்குந் தானே

-Sadhaga Naadi[37]

According to this verse , the symptoms due to excess in pitham are

- Excess heat
- Fever
- Dysentry
- Loss of memory
- Giddiness
- Mental disorders
- Dropsy, burning
- Fear in heart, thirst, dreams
- Loss of consciousness
- Menorrhogia
- Gonorrhoea

பித்தமே செனித்தாற் கூடு

பெலத்துட லுலரச் செய்யும்

பித்தமே மிகுந்தாலீளை

யிருமலும் பெலத்து நிற்கும்

பித்தமே மிகுந்த தானால்

பெலங் குறைந்தும் பழுத்தும்

பித்தமே திரட்டிநூலிற்

பேசினார் பெரியோர் தாமே

-Agathiar guna vaagada Naadi[39]

பித்தமே கதித்த போது பெருந்திடும் வாதமுண்டாம்

பித்தமே கதித்த போது பெருந்திடும் பயிற்றில் வாயு

பித்தமே கதித்த போது பிதற்றிடும் பித்தே கேளு

பித்தமே கதித்த போது பிறந்திடும் பிணியனேகம்.

-Agathiar gunaVaagada Naadi[40]

According to this verse the excess in Pitham may cause symptoms as follows

- Increase in heat leads to dryness of body
- Cough and tuberculosis
- Loss of strength
- Increase in Vatha
- Excess gas in abdomen
- Unwanted talkativeness
- A state of delirium

பகுத்திடிற் பித்தம் பலபல சிந்தையாம்

வருத்திடும் வாந்தியும் வாய் நீராமிக வூறும்

மகுத்திடு மேனியில் மாட்டி எரிப்பேறும்

மிகுந்த வன்னிக்கு மிக விடங்கைக்குமே

-Thirumoolar

According to this verse the symptoms due to excess in pitha are

- Many thinkings
- Vomiting
- Excess secretion of saliva
- Burning sensation in body
- Bitter taste in tongue

கூறிடவே வித்தமது மீறிற்றானால்

கொடுங்காத்த லுட லழற்சி நடுக்க முண்டாம்

மீறிடவே ரோசியந்தான் நாவறட்சி

மேலான சோபமது விக்கல் மூர்ச்சை

தூறிடவே கிறு கிறுப்பு காதடைப்பு

தொந்தமாங் கசப்புடனே மண்டைக் குத்து

ஆமே தான் யத்தி சுரம் பாண்டு சோகை

ஆடான விடாச் சுரமும் பிரமேகந்தான்

போமேதான் காமாலை பித்த வெட்டை

பொல்லாத பாண்டுடனே சிவந்த நீராம்

தேகமே தான் சிவப்பாயு மஞ்சளாயுஞ்

சிறு சிறுத்துயிருண்டு வருங்குழி விழுந்து

நாமே தான் சொன்னோமே பித்தக் கூறு

நவின் றிட்பார் வாசமுனி நவின் றிட்டாரே

-Agathiyar[42]

In these verse Agathiyar says the symptoms of excess Pitham are the follows:

- Heat
- Allergy
- Shivering
- Dryness of tongue
- Dropsy
- Hiccough
- Loss of consciousness
- Giddiness
- Hearing loss
- Bitter taste in tongue, Headache
- Fever, Continuous fever
- Oedema, Anaemia
- Jaundice
- Leucorrhoea

- Red coloured urine
- Red or yellow coloured skin
- Emaciation

ஏலவாய் குழலாய் பித்தஞ் செய்குணம் விளம்பக் கேளாய்

கோல வேல் விழி சிவந்து குளிர்ந்திடிரிருக்கு மல்லால்

சீலவே நீர் கடுத்து நொந்து சுறுககெனச்சி வந்து வீழும்

ஞாலமே கிறுகிறென்று நாவுலர்ந்திருக்குங் காணே

-Agathiarvaithyarathinachurukka naadi[41]

According to this verse, the excess in Pitha cause the following symptoms

- Reddish discolouration and feverishness
- Burning micturition with pain and pricking
- Giddiness
- Dryness of tongue

பித்தத்தில் பித்தமாகில் பிதற்றிடுங் கிறுகிறுக்கும்

சத்தியுமதிக மாகுஞ் சரீரத்திளைப் புண்டாக்கும்

அத்தியாயுலருமேனி யாகமும் நேதாகும்

வற்றியேவெளுத்துக் காயம் வெறண்டு பின் வீக்கமுண்டாம;

-Agathiyargunavagada Naadi[39]

According to this verse, the excessin pitha may cause the symptoms

- Unwanted talking
- Giddiness
- Vomiting
- Breathlessness
- Dryness of body
- Paleness an d oedema of body can occur

தானென்ற பித்த மீறல் சடமெல்லாங் காந்தல் காணும்

ஊனென்ற வாந்தி வாய் நீரூறியே ஓழுகுஞ் சாவான்

வானென்ற மட்டில் வெகுமண்டையில் குத்துண்டாகும்

தேனென்ற விக்கல் மூர்ச்சை செவியடைப்புண்டாம் பாரே

-Agathiar guna vagada Naadi[40]

According to this verse the excess ion pitha may cause the symptoms such as

- Burning sensation all over the body
- Vomiting
- Excess secretion o f Saliva
- Pricking pain in head
- Hiccough
- Unconsciousness
- Loss of hearing
- Death

Relation with taste

Taste, in common is divided into 6 types, called as Aru Suvai (6 taste)

Those are

1. Inippu - Sweet

2. Pulippu - Sour

3. Uppu - Salt

4. Kaippu - Bitter

5. Kaarppu - Pungent

6. Thuvarppu -Astringent

All 6 tastes are formed by the combination of two Boothams from Pancha bootham, These are

Inippu = Prithivi + Appu

Pulippu = Prithivi + Theyu

Uppu = Appu + Theyu

Kaippu = Vayu + Aahaayam

Kaarpu = Vayu + Theyu

Thuvarppu = Prithivi + Vayu

Like that in Mukkutra, Except Azhal, the other two kutra (vali, Iyam) has the combination of two Boothams. Azhal is formed by one Bootha that is

Vali = Vayu + Aahaayam

Azhal = Thee or Theyu

Iyam = Appu + Prithivi

From this we know that the knowledge about the combination of Boothas in the formation of Suvai and Mukkutra is very helpful to know that which taste has increased or neutralized the Mukkutra and to give treatment depending upon this

For example in case of Pitha diseases the taste, sour will become increased . So that to neutralize Pitha we have to give the opposite tastes.

Tastes that increase the Pitham

புளிதுவர் விஞ்சுங்கறி யாற்பூரிக்கும் வாதம்

ஒளி யுவர்கைப் பேறில் பித்துச் சீறும் கிளிமொழியே

கார்ப்படபினிப்பு விஞ்சிற் கபம்விஞ்சு ஞ்சட்டிரதச்

சேரப் புணர் நோயணுகாதே

-Kannu Samiyam[43]

According to this verse, bitter and salt tastes increase the Pitham

Tastes that neutralize the Pitham

பித்தமதி கரிப்பின் பேசும்பரிகாரம்

சுத்தத் துவரொடு சொல்லினிப்புச் - சத்தாகும்

கைப்புச் சுவையே கருதுவதன் வீறு

எய்ப்படையு மென்றுரைத்தா ரிங்கு

-Kannu Samiyam[43]

According to this verse the tastes which neutralize the Pitham are sweet astringent and bitter

Three phases 'PRAPAKAM' metabolism

Prabak metabolism	Thodam	Taste	Function
Inippu	Kabham	Sweet	Moistering the food
Pulippu	Pitham	Sour	Conversion of food into an absorbable form
Kaarpu	Vatham	Pungent	Absorption and separation of food

ALTERATIONS OF PITHAM

The three humours are affected either themselves or with Udal thaathukkal, pathologically

The types of alteration of Pitham

Thannilai Valarchi

Definition : A Kutram which is provoked in its own location is called thannilai valarchi

Limitation : Hate - fullness of the things which are causing thannilai valarchi and likeness of the things which are getting opposite properties are the limitations of thannilai valarchi.

Period : Pitham gets thannilai valarchi during " Kaar Kaalam" - Aavani and purattasi

II. Vetrunilai Valarchi

Definition : A kutram which is provoked to other locations is called ' Vetrunilai valarchi'

Limitation : Signs and Symptoms of the affected kutram and the pathological conditions of the udal thaathukkal give the details of the limitatinos

Period : Pitham gets Vetrunilai valarchi during koothir kaalam Iyppasi and Kaarthigai

III. Thannilai Adiadhal

Definition : A provoked kutram, which is neutralized in its own location is called Thannilai Adaidhal

Period : The provoked Pitha neutralizes during Mun Pani Kaalam Margazhi and Thai.

Types of Pitham

The Siddha classical texts divide Pitham into five subsidiary forms that differ from one another by their localization in the body (Anatomical and by their particular functinos (Physiological)

They are

1. Anal Pitham
2. Eranjagam
3. Saadhagam
4. Aalosgam
5. Prasagam

Anal Pitham

This give appetite and helps in digestion. It has the character of thee or fire. It lies between abdomen and scrotum. Pitham dries the liquid form things and digests the food we take.

Eranjagam:

Which colours the blood

- It increases the quality of blood
- It lives in intestine and gives red colour to the essence which seperate from the food we take

Saadhagam

Which controls the whole body. It has the Accomplishing property. It lies in heart and accomplish the work, via knowledge, mind and desire.

Aalosagam

- Which brightens the eyes
- It shows the things to eyes
- It lies in eyes and shows the shape of all things

Prasagam:

- Which give complexion to the skin.
- It brightens the skin
- It lies in skin and brightens the skin.

Classificatin of Pitha diseases

According to Yugi Vaidhya Chinthamani Pitha diseases are classified into 42 types . According to this classification the symptoms of URATHA PITHAM gives us a picture more or less similar to Hypertension.

Classification

நாட்டினேன் பித்தத்தின் பெயரைத்தானும்

நாற்பத்திரண்டான குணாகுணங்கள்

ஆட்டினேனவுரு பித்தந்தன்னோடு

ஆமலபித்த மதனோடுன்மாத பித்தந்

தாட்டினேன் தமந்த பித்தம் வாத பிததந்

தனித்தோர் பன்னிபித்தஞ் சிலேட்ம பித்தந்

தூட்டினேன்ன சுரோணித பிததந் விகார பித்தந்

துடியான விரண பித்தந் தொகையைக் கேளே

தொகையான வுரத்தபித்த மிரத்த பித்தஞ்

சுழிகாசப் பித்தமொழு சுவாசப் பிததம்

வகையான சி லேட்ம பித்தங் கரும்பித்தந்தான்

மாகரப்பான் பித்தத்தோட சீரண பித்தம்

அகையான வருசிபித்த மெரிபித்தந்தான்

அழல்வித்தந் துடிப்பித்தம் வி'ப்பித்தந்தான்

முகையான அதிசாரப் பித்தந்தானும்

மூலப்பித்த முதிர்வித்த முறைமையாமே

முறைமையாங் கண்ட பித்தமோடு பித்தம்

மூடுபித்த நடுக்குப் பித்தங் கபாலபித்தம்

திறமையாஞ் சர்த்தி பித்தந்தாகப் பித்தந்

தருக்கான விக்கல் பித்தம் 'யபித்தந்தான்

திறமையாந் திமிர்பித்தம் வலிபித்தமோடு

சீதபித்தங் கிருமிபித்தம சாத்ய பித்தம்

மறமையாம் மார்க்க பித்தமருத்தீடு பித்தம்

வகையது நாற்பத்திரண்டு மகிழ்ந்து பாரே.

- Yugi Vaidhya Cinthamani[44]

According to this verse Pitha diseases are classified into 42 types

1. Aavuru pitham
2. Amalaga pitham
3. Unmadha pitham
4. Tghamandha pitham
5. Vatha pitham
6. Vanni pitham
7. Silathma pitham
8. Suronitha pitham
9. Vigara pitham
10. Virana pitham
11. Uraththa pitham
12. Raththa pitham
13. Kaasa pitham
14. Swasa pitham
15. Semipitham
16. Karum pitham

17. Karappan pitham
18. Aseerana pitham
19. Aroosi pitham
20. Eri pitham
21. Azhal pitham
22. Thudi pitham
23. Athisaara pitham
24. Moola pitham
25. Vida pitham
26. Muthir pitham
27. Kanda pitham
28. Oodu pitham
29. Moodu pitham
30. Naaduku pitham
31. Kabaala pitham
32. Sarthi pitham
33. Thaga pitham
34. Vikkal pitham
35. Shaya pitham (Kaya pitham)
36. Thimir pitham
37. Vali pitham
38. Seetha pitham
39. Kirumi pihtam
40. Asathiya pitham
41. Markkap pitham
42. Marumdeedu pitham

Thingal or nilam

According to pathartha guna chinthamani

Thinai or Nilam is classified into five types

They are

1. Kurinji - Mountain and its surroundings
2. Mullai - Forest and its surroundings
3. Marutham - Field and its surroundings
4. Neithal - Sea and its surroundings
5. Paalai - Desert and its surroundings

1. Kurinji

குறிஞ்சி வரு நிலத்திற் கொற்றமுண்டி ரத்தம்

உறிங்சி வரு சுரமு முண்டாம் - அறிஞரைக்

கையமே தங்குத ரத்தாமை வல்லை யுங்கதிக்கும்

ஐயமே தங்கு மறி

According to this verse in kurinji kabha diseases, fever which cause anaemia tumour in stomach (Aamai katti) are common

2. Mullai

முல்லை நிலத்தமைய முந்நிரை மேவினுமவ்

வெல்லை நிலைத்த பித்த மெய்துறங்காண் - அல்லவெனின்

வாதமொழி யாததனுண் மன்னு மவை வழிநோய்ப்

பேதமொழி யாதறையப் பின்பு

According to this verse in Mullai Pitha diseases, liver diseases and Vatha diseases commonly occur

3. Marutham

மருதநில நன்னீர் வளமொன்றைக ் கொண்டே

பொரு தநில மாதியநோய் போக்குங் - கருதநிலத்

தாறிடதஞ் சூழ வருந்துவரென் றாற் பிணியெல்

ஏறிரதஞ் சூழ்விக்கு மில்

According to this verse in Marutham Vatha, Pitham and Kabha diseases all get cured. It is the best place to live.

4.Neithal

நெய்தனில மேலுவர்ப்பை நீங்கா துறினுமது

வெய்தனில மேதங்கு வீடாகும் - நொய்தீன்

மருங்கு டலை முக்காக்கி வல்லுறுப்பை வீக்குங்

கரு ங்குடலைக் கீழிறக்குங் காண;

According to this verse in Neithal pitha vayu, filariasis and Hernia occur commonly

5. Paalai

பாலை நிலம்போற் படரைப் பிறப்பிக்க

லைநில மீயாது விரித்தற்கு - வேலைநில

முப்பிணிக்கு மில்லாம் முறையே யவற்றலாம்

எப்பிணிக்கு மில்லா மக்தென்

According to this verse in Paalai Vatham, Pithtam and Kabham get deranged and lead to various diseases.

குறிஞ்சி நிலமே வாதமாங் காணும் பாலை பித்தமாஞ்
செறிந்த மருதஞ் சிலேத்மமாங் சிலேத்மவாத முல்லையதாம்
நிறைந்த நெய்தல் வாதபித்தம் நிலைங்களதனை மயக்கா
லுறைந்த வியாதி கலந்திருக்கு முபாயமறிந்து செய்வீரே

- **PadhinenSiddharnaadisaaam**[48]

According to this verse the diseases that develop in each land in as follows

Kuringi – Vatha diseases

Mullai - Kabha vatha diseases

Marutham - Kabha diseases

Neithal - Vatha pitha disease

Palali - Pitha diseases

Paruva Kaalangal

A year is classified into six seasons eachy consitutes two months , they are

Season	**Months**
Kaarkaalam	Aavani and Purattasi
Koodhir kaalam	Iyppasi and Kaarththigai
Munpani Kaalam	Maargazhi and thai
Pin pani kaalam	Maasi and panguni
Elavenir Kaalam	Chiththirai and Vaigaasi
Muthu venir kaalam	Aani and Aadi

VANMAI:

1.Iyrarkai vanmai

It is formed naturally from Mukkuna . These are Sathuva, Rajotha and thamo gunaas

2. Kaala vanmai

It is due to year (Age) and the Paruva kalangal

3. Seyarkai vanmai

It secure the body which is formed through the Mukkuna by proper day to day diet according to that 'Gunam' and by drug intake without disturbing the vitality of the body

Mukkutrangal

Normal proportions and functions are important to maintain a normal healthy body. If changes take place in Mukkutram it may lead to diseases. So the changes in Mukkutram is the main source in diagnostic purpose of diseases.

URATHA PITHAM

Definition:-

Urathapitham is the one having similar symptoms with Hypertension among the 42 types mentioned in Yugivaithyachinthamani. The symptoms are Giddiness, Head ache, Fatigue.

உரத்தபித்தம்

"மூர்க்கமாங் கோபமதுமிகவுண் டாடு
முனையாகவடிகடிக்குச் சண்டைகொள்ளும்
ஆர்க்கமாயக் கூவியேவிரைச்சலாகு
மாதான பாதாளம் பேதி யாகும்
நார்க்கமாய் நன்மைதுன்மைதோன்றாமற்றான்
நலக்கமாகாகண் சிவக்குந் தூக்கமில்லை
ஊர்க்கமாயுடழ்தூ லிக்குமுப்பு
முரத்தவித்தவாதத்திலுண்மைதானே"

- **Yugi Vaidhya Cinthamani**[31]

- Frequent angerness.
- Aggressive behaviour
- Speaking in high – pitched voice
- Frequent diarrhoea.
- Inability to differentiate good things
- Redness of the eyes.
- Insomnia
- Obesity.

DIFFERENTIAL DIAGNOSIS:-

சீத பித்தம்

வன்மையாயுடம்பெங்கும் வடியுந் தண்ணீர்
மயக்கமாயுடல்கனத்துப் பாரமாகும்
புண்மையாய்ப் பிடரிதனி,முருவுண் டாகும்
பொருமியேவயிறுப் பிசந்தானாகும்
திண்மையாயுடல்கனத்துச் சொக்குபோலாஞ்
சீறியேமிகவருமிச் சிந்தைகேடாஞ்
செண்மையாய் வாய்நீர்தான் உப்புறைக்குஞ்
சிறுநீருஞ் சிகப்பாகுந் சீதபித்தம்.

-**YugiVaidhyaCinthamani**[34]

The clinical feature of seetha pitham are:

- Excess sweating
- Giddiness
- Pain in the neck
- Abdominal distension
- Tiredness
- Cough
- Redness of urine.

Even though, the symptoms of seetha pitham are related to urathapitham, cough, redness of urine, pain in the neck are not present in urathapitham, so it is varied from 'Urathapitham'.

வாத பித்தம்

தரிப்பானகண்தனையேமிகமறைக்குந்
தரியாதமிகவரைச்சல் புகைச்சலுண்டி
மிரிப்பானகண்மின் மினியாய் சுழன்று
மிக்கநீர்ததும்பியேகலங்கிநிற்கும்

வரிப்பானமின்னுடம்புவியர்வைபாகு
மயக்கமொடதியக்கமாய் வாந்தியாகும்
குறிப்பானகொம்பேமும் அனினம் வேண்டாங்
கூறினோம் வாதபித்தகொள்கைதானே!

- **Yugi Vaidhya Cinthamani**[35]

Description:-

- Fatigue
- Giddiness
- Excessive sweating
- Vomitting
- Loss of appetite
- Blurring of vision

Even though the symptoms of vathapitham are related to Urathapitham vomiting, loss of appetite are not present in Urathapitham. So it is varied from Urathapitam.

According to Theriyarvagadam, Thalaichuzhalpitham belongs to Pitha disease.

தலைச்சுழல் பித்தம்

''அழல்பித்தமுடம் பெல்லாமலையாய் வீசும்
அதிகமதாய் தாகமு மிகவுண்டாகும்
சுழல் பித்தம் நடக்கையிலேகிறுகிறுவென்று
சுற்றிவிமுக் காட்டுமெனமருவறுக்கும்''

-Yugi Vaidhya Cinthamani[36]

The above symptoms are offer the complications of Diabetes mellitus,

So it is varied from Urathapitham.

Complication of Urathapitham According to "Agathiyar Gunavagadam"

"கேளடா இருதயத்தில் துடிப் புண்டாகும்
கேடியான மூச்சுமுட்டல் தோன்றுமப்பா
நீளடாவேகமாய் நடக்கவோட்டா
நிசமான இடதுபக்க இரத்தாசயத்தில்
வாளடாவேதனையும் உணர்ச்சிகுன்றி

வளமானசிரசினில்தான் வலியும் காட்டும்
தேளடாஅடிக்கடித்தான் மயக்கம் உண்டாம்
தேளிவான இருதயத்தில் காதுவைத்துக்கேளே
காதுவைத்துக் கேட்டாக்கால் இருதயத்தின்
கனமானசத்தங்கள் கேட்டிடாது
நிதியாய்க் கையைவைத்துப் பார்தாயானால்
நிச்சயமாய்ப் பலமாகஅடிக்கும் பாரு
சோதித்தசிகிச்சையைநான் சொல்வேன் பாரு
சுகமாக்கவகையறியச் சொல்வேன்பாரே''

- **Agathiyar Gunavagadam**[39]

Description:-

- Palpitation
- Breathlessness
- Difficulty in walking
- Pain in the left sided chest
- Muffled heart-sounds on auscultation
- Having opical impulse on palpation
- Fainting
- Head ache

According to **Pararasasekaram**.

பித்தமதிகரித்தலால் பிறக்கும் வேறு நோய்கள்

''பித்தமேயதிகரித்தாற் பெருத்திடுங் கசமுங் காசம்
மெத்தவேவீக்கநீ தோன்று மிகுத்திடு முலர்ந்து சூலை
ஒத்ததோநிரத்த குனிம மோடிய குடல்வாதங்கள்
எய்திடுசெங்கண் மாரியின்னமுமனேகநோய்கள்''

-**Pararasasekaram**[30]

Description:-

- Respiratory disease
- Oedema
- Peripheral neuritis
- Persistent gastric ulcer**.**

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PINIYARI MURAIMAI (DIAGNOSIS):

Diagnosis is the very important thing for a physician by which he deals the disease by finding its cause and is helpful to undertake a correct line of treatment and also prognosis.

The diagnosis is based on

- Poriyalarithal (Inspection)
- Pulanal arithal (Palpation)
- Vinathal (Interrogation) and
- Envagai thervugal.

1.Poriyal arithal

Porigal are the five organs of perception. They are nose, tongue, eyes, skin & ears. Poriyalarithal is examining the pori of the patient by pori of the physician.

2. Pulanal arithal

Pulangal are the five object of senses namely smell, taste, sight, sensation and sound.

3.Vinathal (Interrogation):

By vinathal, the physician knows about the patient's name, age, occupation, native place (thinai), family history, socio economic status, dietary habits, his complaints, history of past illness, relevant history of treatment and habits etc.,

EZHU UDAL THATHUKKAL

1. Saaram

It strengthens the body and mind . It is affected in **Uratha pitham** and causes general debility

2. Senneer

It gives power, knowledge, boldness to the mankind and red colour to the blood. It is affected in **Uratha pitham** causes anaemia.

3. Oon

It gives the structure, shape to the body and it is responsible for the movements of the body. It is affected in **Uratha pitham** causes emaciation.

4. Kozhuppu

It lubricates the joints and control their function

It is not affected in **Uratha pitham**

5. Enbu

It protects the joints and facilitates their function.

it is affected in **Uratha pitham** causes pain in the joints

6. **Moolai**

It protects the joints and facilitates their function and gives strength to bone.It is not affected in **Uratha pitham**

7. **Sukkilam or Suronitham**

It is concerned with reproduction. It is not affected in **Uratha pitham**

4.Envagai thervugal:

It is the basis diagnostic principle and the unique speciality of the Siddha system of medicine. The following verse's reveals this follows.

Envagai thervugal are

- Naadi (pulse)
- Sparisam (palpation)
- Naa (tongue)
- Niram (colour of the skin)
- Mozhi (speech)
- Vizhi (eyes)
- Malam (motion)
- Moothiram (urine)

Envagai thervugal gives a definite idea to diagnose Uratha pitham. This is explained as follows.

Three vital forces namely vatham, pitham and kabam. The three uyirthathukkal which organise, regularise and integrate the life activities in each and every living being.

The same three fundamentals are described as Edakalai, pinkala and suzhumunai in yoga tents which describes the methods for preventing disease and for prolonging life to altairwiselom and salvation. The same explanation is also in Siddha tents for under standing the unity in diversity to active health, weath and happiness and satisfaction

On the basis of the examination of the senses and on the basis of eight special examination and interrogation all the details of the disease factor are collected and their final diagnoses is confirmed with those findings made on Naadiparichai.

1.Naadi

In the Noi **Nadal Noi Mudhal Nadal** text it is defined as follows,

நாடி

"உயிர்க்காதாரம் முயிர்த் தாதெனவும்
முப்பிரிவாகிமுக்குண மனுகி
உடலையு முயிரையு மோம்பிக் காத்து
வருமன முதுமறை வகுக்குந் துணிவே"

-**Noi naadal noi muthal naadal**[38]

Naadi is omnipresent cosmic vibrant force connecting the malroscespnic with the human body is a subtte diagnostic tool handed by the Siddhars. These vibrations enter into the human body from the universe, keep the life vibrator continuously and generate the energy required for the human metabolism. Naadi is the vital force. The examination of Naadi has been recognised as one of the principal means of diagnosis and prognosis of the disease from time immemorial. Any change in the Mukkutram is best diagnosed by feeling the Naadi. The power of Naadi manifests in the body as

Genesis of naadi:

The three Thathukkal are formed by the combination of three Naadies with three Vayus.

Idakalai	+	Abanan	=	Vatham
Pinkalai	+	Piranan	=	Pitham
Suzhumunai	+	Samanan	=	Kabam

These can be felt one inch above the wrist on the radial side by means of palpation with the tips of index, middle and ring finger corresponding to vatham, pitham and kabam respectively.

2.Sparisam (palpation):

By sparisam, the temperature of sin (heat or cold), smoothness, sweat, dryness, hard patches, swelling, abnormal growth, tenderness, ulcers, enlargements, nourishment can be noted.

3.Naa (Tongue):

In the examination of tongue, its colour, coating, dryness, deviationandmovement, variations in taste and the conditions of teeth and gums can be noted.

4.Niram (colour):

By examining the niram, the type of udal (body) whether vatham (black), pitham (red or yellow) and kabam (white) or mixed, cyanosis and pallor of the body can be noted.

5.Mozhi (speech or voice):

In the examination of mozhi, high or low pitched voice, slurring and incoherent speech, nasal or crying, hoarseness of voice can be noted.

6.Vizhi (Eye):

In the examination of vizhi, the change in the colour of the eye such as redness, yellowishness, pallor etc may be noted. With these dryness, lacrimation, sharpness of vision, response of the pupile, falling of hair in eye-lashes, inflammations and ulcerations may also be noted.

7.Malam (stools):

In the examination of malam, its nature (whether it is solid, semisolid or liquid), its colour, its quantity (increased or decreased) can be noted. Other examinations like diarrhoea, presence of blood, mucus, undigested matter in the stools and odour should be studied.

8.Moothiram(urine):

In the examination of urine, the colour, odour, quantity of urine, the presence of froath, deposits, blood, pus, small stones, abnormal constituents such as sugar, proteins etc., and the frequency of urination can be noted.

Neerkuri and Neikuri are the two methods used to diagnose the disease. They are discussed below.

Neerkuri:

According to this verse, the general features of urine, ie., niram, edai, manam, nurai and enjal are analysed.

- Niram indicates the colour of the urine voided.
- Edai indicates the specific gravity of the urine voided
- Manam indicates the smell of the urine voided.
- Nurai indicates the froathy nature of the urine voided.
- Enjal indicates the quantity (increased or decreased) of the urine voided.

Neikuri:

For this examination, urine is collected in the early morning in a pure glass vessel. The patient should be prepared specially for this before a day in a manner of not taking excessive diet in irregular timing etc.

A drop of gingelly oil is dropped on a wide vessel containing the urine to be tested and placed in the sunlight in a calm place. The derangement of the three thathuvas and the disease can be diagnosed by the behaviour of gingelly oil on the surface of the urine.

PATHOLOGY

In Siddha system of medicine, disease have been classified in the basis of Mukkuttam. Uratha Pitham Noi is one among the Pitha dominant disease. In this disease the Azhal Kuttram is elevated from its normal plane. According to Noi Nadal Noi Muthal Nadal Thirattu the patho physiology of Uratha Pitham Noi is explained as elevation of Pitha from its normal unit and thereby increase the heat of the body. Then the normal function of Dhasavayu have been affected. "Due to increased Azhal and the elevated function of Vayu the disease arise". Though the prime causative factor is Azhal kuttram, the other two humours Vatha and Kaba are also affected simultaneously. Because of that only the disease is classified in the basis of three Dhosas.

The three thosam theory has a strong hold on the study of Gunam.

1. **Sattuva**

It is the illuminating pure and good quality**.**

2. Rajo

It is the quality of mobility of activity. It makes a person active and energetic tense and willful

3. Thamo

It is the dark and restraining quality.

Of these three gunas the Rajo Guna is of pitha type. A man in whom Rajo Guna predominates has inner thrist and affectionate. As he is passionate and covetous, he hurts others. He is unsteady, fickle, easily distracted as well as ambition and acuisitive, He shrinks from unpleasant things and clings to pleasant ones. His speech is sour and his stomach greedy. These are the normal qualities are Rajo Guna individuals. All the human beings are affected by these Guna factor. Unless the bad qualities of Gunas are controlled disease like Uratha Pitham Noi will occur due to humoral changes in the body as a stress factor.

Line of treatment Siddha literatures.

Among these remedies,

Puthina theeneer-15 to 30ml twice a day with water,after food

3. Diet:

Siddhars advice the diet regimen for pitha patients and they are explained below:

Diet to be add

1.Kanchi(Rice water).
2.Athi pinchu(Ficus glomavata)
3.Avarai pinchu(Dolichos lab-lab)
4.Kathari pinchu (Solanum rubrum)
5.Ponnanganni keerai(Alternanthera sessilis)
6.Siru keerai (Amaranthus gangeticus)
7.Arai keerai(Portulaca quadrifolia)
8.Puliyarai keerai (Oxalis korniculatus).
9.Chukkan keerai (Rumex vesicarius).

Diet restriction:

Siddhars advice to avoid sour, salty and pungent food for Uratha Pitham noi. Nowadays all the Patient were advised to take low sodium diet (less than 5mg per day) and to take low fatty diet (especially oils containing mono-unsaturated fatty acids (MUFA).

Yoga therapy:

Yogasanam is one of the part of Astanga Yogam. It controls mind and body by various mechanisms. So it has been applied to control various stress-related diseases nowadays as an adjuvant therapy.

Mechanisam:

Every Asanas require the spine to be kept erect and to keep riched blood supply to the pelvic region. This stimulates kundalini, which controls the mind and body.

In modern study, it seems to stimulation of Psycho-neuro hormonal axis which controls the sympathetic overactivity. This in turn eliminates free radicals, catecholamines and secrets endorphins and encephalins which is a natural steroidal hormone which helps to maintain the body and mind active and releive the stress.

Asanas beneficial in Hypertension:

- Padmasanam
- Pranayamam
- Savasanam.
- Surya namaskaram

Relaxation Therapy:

It is particularly useful for anxiety disorders, Psychosomatic disorders (e.g Hypertension) and in other conditions where anxiety is associated (e.g. smoking, sexual disturbances, sleeplessness). It is usually done in a calm room with a relaxed mind in the lying down posture with palms facing upwards for about 15 to 20 minutes twice daily. The underlying principle is the counterproductive nature of relaxation towards anxiety. So the cycle (anxiety leading to muscle tension which in turn aggravates anxiety) is broken by this approach.

In this method, relaxation is done through concentration on certain thoughts by Autogenous training. In the commonly used Jacobson's method, the client is taught to relax one group of muscles at a particular time (by alternate contraction and relaxation) which progresses slowly from head to foot until the whole body is relaxed.

The person also knows the adverse effect of muscle contraction. For example, the relaxation of head muscles will often correct tension Headache. So it is a simple and highly useful technique.

Transcendental Meditation:

It is an unusual state of consciousness taking qualities of both sleep and wakefulness with a profound state of rest. It decreases the oxygen consumption, heart rate respiratory rate and sympathetic overactivity. So it reduces tension and anxiety. It improves interpersonal relationships and concentration power.

There are number of meditative processes like attending to a mental repetation of a sound or mantra etc.

In our programme, the patient was asked to repeat a word (as he likes) silently for about 20 minutes twice daily in a relaxed, calm, comfortable position with eyes closed, It removes the inner conflicts, anxiety and mental stress very effectively. So a sense of well-being and mental relaxation with good sleep was observed in Patients who do this mediation regularly.

Prevention:

1. Relieving the tension or the stress and stain of life by reducing unnecessary burden and responsibilities.
2. Transforming the attitudes and belief systems so as to reduce anxiety and excitement.
3. Good sleep.
4. Low sodium chloride intake (less than 5gm per day).
5. Totally avoiding intake of tabacco.
6. Stopping alcohol consumption or reducing it considerable.
7. Overcoming obesity.
8. Avoiding constipation.
9. Light regular exercise (avoid undue physical strain and exertion).
10. Practice of relaxation and positive thinking.

MODERN ASPECT

MODERN ASPECTS

HYPERTENSION

DEFINITION:

The Hypertension is used to describe an increase in blood pressure, systemic hypertension is an increase in the pressure in the arteries of the systemic circulation. PH is an increase in the pressure in the pulmonary arteries. Portal hypertension is an increase in the pressure in the portal veins. When the term hypertension is used alone, it means systemic hypertension.

SYSTEMIC HYPERTENSION:

Systemic Hypertension cannot be define precisely. The normal arterial blood pressure is not the same in all people, and even in a single individual it varies widly under conditions of physical or emotional stress.

BP scheme for adults (in mmHg)

- Normal systolic Bp (SBP) < 120 and diastolic Bp (DBp) <80
- Prehypertensive: SBp 120 – 139 or DBp 80 – 89.
- Stage 1 hypertension : SBp 140 – 159 or DBp 90 – 99.
- Stage 2 hypertension : SBp <160 or DBp >= 100.

Hypertension becomes more common as age increases.

For patients with hypertensions, the basic Bp control target is <140/ <90 mmHg, but the target is <130/<80mm Hg, for patients with diabetes or renal disease. A sustained diastolic pressure >89mm Hg and systolic pressure in excess of 139mm Hg are associated with a measurably increased risk of atherosclerosis.

ANATOMY OF THE HEART

The **heart** is a muscular organ in humans and other animals, which pumps blood through the blood vessels of the circulatory system. Blood provides the body with oxygen and nutrients, as well as assists in the removal of metabolic wastes. In humans, the heart is located between the lungs, in the middle compartment of the chest.

In humans, other mammals, and birds, the heart is divided into four chambers: upper left and right atria; and lower left and right ventricles. Commonly the right atrium and ventricle are referred together as the *right heart* and their left counterparts as the *left heart*. Fish, in contrast, have two chambers, an atrium and a ventricle, while reptiles have three chambers. In a healthy heart blood flows one way through the heart due to heart valves, which prevent backflow.The heart is enclosed in a protective sac, the pericardium, which also contains a small amount of fluid. The wall of the heart is made up of three layers: epicardium, myocardium, and endocardium.

The heart pumps blood with a rhythm determined by a group of pacemaking cells in the sinoatrial node. These generate a current that causes contraction of the heart, traveling through the atrioventricular node and along the conduction system of the heart. The heart receives blood low in oxygen from the systemic circulation, which enters the right atrium from the superior and inferior venae cavae and passes to the right ventricle. From here it is pumped into the pulmonary circulation, through the lungs where it receives oxygen and gives off carbon dioxide. Oxygenated blood then returns to the left atrium, passes through the left ventricle and is pumped out through the aorta to the systemic circulation–where the oxygen is used and metabolized to carbon dioxide. The heart beats at a resting rate close to 72 beats per minute. Exercise temporarily increases the rate, but lowers resting heart rate in the long term, and is good for heart health.

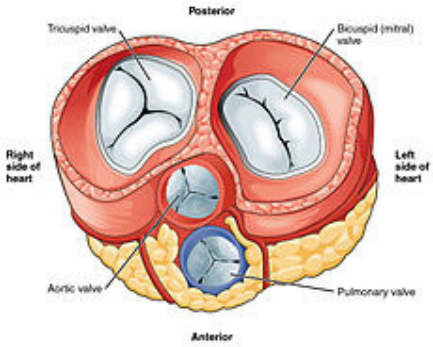
Cardiovascular diseases (CVD) are the most common cause of death globally as of 2008, accounting for 30% of deaths. Of these more than three quarters are a result of coronary artery disease and stroke. Risk factors include: smoking, being overweight, little exercise, high cholesterol, high blood pressure, and poorly controlled diabetes, among others.Cardiovascular diseases frequently have no symptoms or may cause chest pain or shortness of breath. Diagnosis of heart disease is often done by the taking of a medical history, listening to the heart-sounds with a stethoscope, ECG, and ultrasound. Specialists who focus on diseases of the heart are called cardiologists, although many specialties of medicine may be involved in treatment.

Chambers

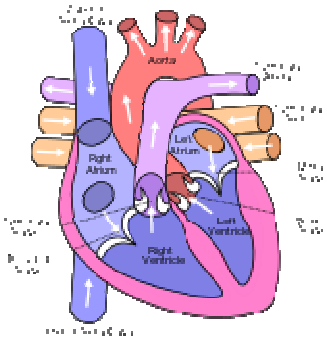
The heart has four chambers, two upper atria, the receiving chambers, and two lower ventricles, the discharging chambers. The atria open into the ventricles via the atrioventricular valves, present in the atrioventricular septum. This distinction is visible also on the surface of the heart as the coronary sulcus. There is an ear-shaped structure in the upper right atrium called the right atrial appendage, or auricle, and another in the upper left atrium, the left atrial appendage.The right atrium and the right ventricle together are sometimes referred to as the *right heart*. Similarly, the left atrium and the left ventricle together are sometimes referred to as the *left heart*. The ventricles are separated from each other by the interventricular septum, visible on the surface of the heart as the anterior longitudinal sulcus and the posterior interventricular sulcus.

The cardiac skeleton is made of dense connective tissue and this gives structure to the heart. It forms the atrioventricular septum which separates the atria from the ventricles, and the fibrous rings which serve as bases for the four heart valves. The cardiac skeleton also provides an important boundary in the heart's electrical conduction system since collagen cannot conduct electricity. The interatrial septum separates the atria and the interventricular septum separates the ventricles. The interventricular septum is much thicker than the interatrial septum, since the ventricles need to generate greater pressure when they contract.

Valves



With the atria and major vessels removed, all four valves are clearly visible



The heart has four valves, which separate its chambers. One valve lies between each atrium and ventricle, and one valve rests at the exit of each ventricle.

The valves between the atria and ventricles are called the atrioventricular valves. Between the right atrium and the right ventricle is the tricuspid valve. The tricuspid valve has three cusps, which connect to chordae tendinae and three papillary muscles named the anterior, posterior, and septal muscles, after their relative positions. The mitral valve lies between the left atrium and left ventricle. It is also known as the bicuspid valve due to its having two cusps, an anterior and a posterior cusp. These cusps are also attached via chordae tendinae to two papillary muscles projecting from the ventricular wall.

The papillary muscles extend from the walls of the heart to valves by cartilaginous connections called chordae tendinae. These muscles prevent the valves from falling too far back when they close. During the relaxation phase of the cardiac cycle, the papillary muscles are also relaxed and the tension on the chordae tendineae is slight. As the heart chambers contract, so do the papillary muscles. This creates tension on the chordae tendineae, helping to hold the cusps of the atrioventricular valves in place and preventing them from being blown back into the atria.

Two additional semilunar valves sit at the exit of each of the ventricles. The pulmonary valve is located at the base of the pulmonary artery. This has three cusps which are not attached to any papillary muscles. When the ventricle relaxes blood flows back into the ventricle from the artery and this flow of blood fills the pocket-like valve, pressing against the cusps which close to seal the valve. The semilunar aortic valve is at the base of the aorta and also is not attached to papillary muscles.

This too has three cusps which close with the pressure of the blood flowing back from the aorta.

Right heart

The right heart consists of two chambers, the right atrium and the right ventricle, separated by a valve, the tricuspid valve.

The right atrium receives blood almost continuously from the body's two major veins, the superior and inferior venae cavae. A small amount of blood from the coronary circulation also drains into the right atrium via the coronary sinus, which is immediately above and to the middle of the opening of the inferior vena cava. In the wall of the right atrium is an oval-shaped depression known as the fossa ovalis, which is a remnant of an opening in the fetal heart known as the foramen ovale.Most of the internal surface of the right atrium is smooth, the depression of the fossa ovalis is medial, and the anterior surface has prominent ridges of pectinate muscles, which are also present in the right atrial appendage.

The right atrium is connected to the right ventricle by the tricuspid valve. The walls of the right ventricle are lined with trabeculae carneae, ridges of cardiac muscle covered by endocardium. In addition to these muscular ridges, a band of cardiac muscle, also covered by endocardium, known as the moderator band reinforces the thin walls of the right ventricle and plays a crucial role in cardiac conduction. It arises from the lower part of the interventricular septum and crosses the interior space of the right ventricle to connect with the inferior papillary muscle. The right ventricle tapers into the pulmonary trunk, into which it ejects blood when contracting. The pulmonary trunk branches into the left and right pulmonary arteries that carry the blood to each lung. The pulmonary valve lies between the right heart and the pulmonary trunk.

Left heart

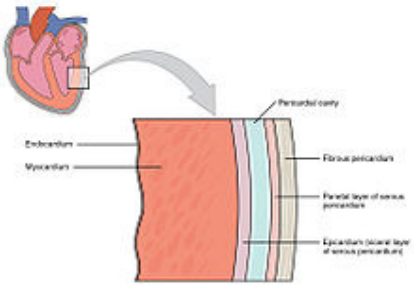
The left heart has two chambers: the left atrium, and the left ventricle, separated by the mitral valve.

The left atrium receives oxygenated blood back from the lungs via one of the four pulmonary veins. The left atrium has an outpouching called the left atrial appendage.

Like the right atrium, the left atrium is lined by pectinate muscles. The left atrium is connected to the left ventricle by the mitral valve.

The left ventricle is much thicker as compared with the right, due to the greater force needed to pump blood to the entire body. Like the right ventricle, the left also has trabeculae carneae, but there is no moderator band. The left ventricle pumps blood to the body through the aortic valve and into the aorta. Two small openings above the aortic valve carry blood to the heart itself, the left main coronary artery and the right coronary artery.

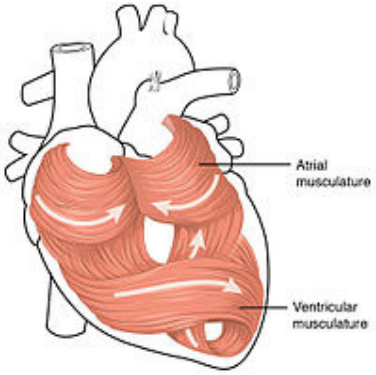
Heart wall



Layers of the heart wall, including visceral and parietal pericardium.

The heart wall is made up of three layers: the inner endocardium, middle myocardium and outer epicardium. These are surrounded by a double-membraned sac called the pericardium.

The innermost layer of the heart is called the endocardium. It is made up of a lining of simple squamous epithelium, and covers heart chambers and valves. It is continuous with the endothelium of the veins and arteries of the heart, and is joined to the myocardium with a thin layer of connective tissue. The endocardium, by secreting endothelins, may also play a role in regulating the contraction of the myocardium.



The swirling pattern of myocardium helps the heart pump effectively

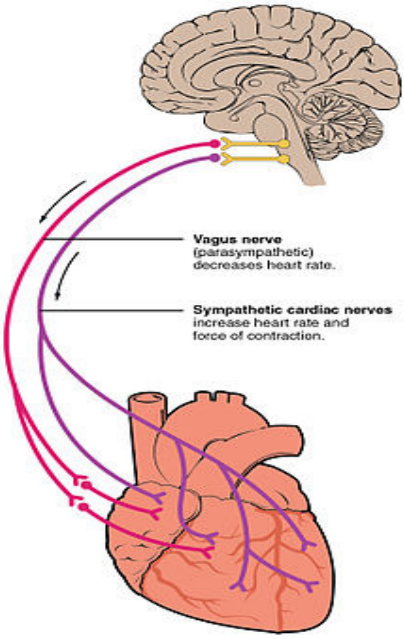
The middle layer of the heart wall is the myocardium, which is the cardiac muscle – a layer of involuntary striated muscle tissue surrounded by a framework of collagen. The cardiac muscle pattern is elegant and complex, as the muscle cells swirl and spiral around the chambers of the heart, with the outer muscles forming a figure 8 pattern around the atria and around the bases of the great vessels, and inner muscles formining a figure 8 around the two ventricles and proceed toward the apex. This complex swirling pattern allows the heart to pump blood more effectively.

There are two types of cells in cardiac muscle: muscle cells which have the ability to contract easily, and pacemaker cells of the conducting system. The muscle cells make up the bulk (99%) of cells in the atria and ventricles. These contractile cells are connected by intercalated discs which allow a rapid response to impulses of action potential from the pacemaker cells. The intercalated discs allow the cells to act as a syncytium and enable the contractions that pump blood through the heart and into the major arteries. The pacemaker cells make up 1% of cells and form the conduction system of the heart. They are generally much smaller than the contractile cells and have few myofibrils which gives them limited contractibility. Their function is similar in many respects to neurons. Cardiac muscle tissue has autorhythmicity, the unique ability to initiate a cardiac action potential at a fixed rate – spreading the impulse rapidly from cell to cell to trigger the contraction of the entire heart.

The pericardium surrounds the heart. It consists of two membranes: an inner serous membrane called the epicardium, and an outer fibrous membrane. Blood vessels and nerves reach the cardiac muscle from the epicardium. These help influence the heart

rate. These enclose the pericardial cavity which contains the pericardial fluid that lubricates the surface of the heart.

Nerve supply



Autonomic innervation of the heart

The heart receives nerve signals from the vagus nerve and from nerves arising from the sympathetic trunk. These nerves act to influence, but not control, the heart rate. Sympathetic nerves also influence the force of heart contraction. Signals that travel along these nerves arise from two paired cardiovascular centres in the medulla oblongata. The vagus nerve of the parasympathetic nervous system acts to decrease the heart rate, and nerves from the sympathetic trunk act to increase the heart rate. These nerves form a network of nerves that lies over the heart called the cardiac plexus.

Hypertension

Definition

Hypertension is high blood pressure. Blood pressure is the force of blood pushing against the walls of arteries as it flows through them. Arteries are the blood vessels that carry oxygenated blood from the heart to the body's tissues.

Description

As blood flows through arteries it pushes against the inside of the artery walls. The more pressure the blood exerts on the artery walls, the higher the blood pressure will be. The size of small arteries also affects the blood pressure. When the muscular walls of arteries are relaxed, or dilated, the pressure of the blood flowing through them is lower than when the artery walls narrow, or constrict.

Blood pressure is highest when the heart beats to push blood out into the arteries. When the heart relaxes to fill with blood again, the pressure is at its lowest point. Blood pressure when the heart beats is called systolic pressure. Blood pressure when the heart is at rest is called diastolic pressure. When blood pressure is measured, the systolic pressure is stated first and the diastolic pressure second. Blood pressure is measured in millimeters of mercury (mm Hg). For example, if a person's systolic pressure is 120 and diastolic pressure is 80, it is written as 120/80 mm Hg. The American Heart Association has long considred blood pressure less than 140 over 90 normal for adults. However, the National Heart, Lung, and Blood Institute in Bethesda, Maryland released new clinical guidelines for blood pressure in 2003, lowering the standard normal readings. A normal reading was lowered to less than 120 over less than 80.

Hypertension is a major health problem, especially because it has no symptoms. Many people have hypertension without knowing it. In the United States, about 50 million people age six and older have high blood pressure. Hypertension is more common in men than women and in people over the age of 65 than in younger persons. More than half of all Americans over the age of 65 have hypertension. It also is more common in African-Americans than in white Americans.

Hypertension is serious because people with the condition have a higher risk for heart disease and other medical problems than people with normal blood pressure. Serious complications can be avoided by getting regular blood pressure checks and treating hypertension as soon as it is diagnosed.

If left untreated, hypertension can lead to the following medical conditions:

- Arteriosclerosis, also called atherosclerosis
- Heart attack
- Stroke
- Enlarged heart
- Kidney damage.

Arteriosclerosis is hardening of the arteries. The walls of arteries have a layer of muscle and elastic tissue that makes them flexible and able to dilate and constrict as blood flows through them. High blood pressure can make the artery walls thicken and harden.

Arteries narrowed by arteriosclerosis may not deliver enough blood to organs and other tissues. Reduced or blocked blood flow to the heart can cause a heart attack. If an artery to the brain is blocked, a stroke can result.

Hypertension makes the heart work harder to pump blood through the body. The extra workload can make the heart muscle thicken and stretch. When the heart becomes too enlarged it cannot pump enough blood. If the hypertension is not treated, the heart may fail.

The kidneys remove the body's wastes from the blood. If hypertension thickens the arteries to the kidneys, less waste can be filtered from the blood. As the condition worsens, the kidneys fail and wastes build up in the blood. Dialysis or a kidney transplant are needed when the kidneys fail. About 25% of people who receive kidney dialysis have kidney failure caused by hypertension

Causes and symptoms

Many different actions or situations can normally raise blood pressure. Physical activity can temporarily raise blood pressure. Stressful situations can make blood pressure go up. When the **stress** goes away, blood pressure usually returns to normal.

These temporary increases in blood pressure are not considered hypertension. A diagnosis of hypertension is made only when a person has multiple high blood pressure readings over a period of time.

The cause of hypertension is not known in 90 to 95 percent of the people who have it. Hypertension without a known cause is called primary or essential hypertension.

When a person has hypertension caused by another medical condition, it is called secondary hypertension. Secondary hypertension can be caused by a number of different illnesses. Many people with kidney disorders have secondary hypertension. The kidneys regulate the balance of salt and water in the body. If the kidneys cannot rid the body of excess salt and water, blood pressure goes up. Kidney infections, a narrowing of the arteries that carry blood to the kidneys, called renal artery stenosis, and other kidney disorders can disturb the salt and water balance.

Cushing's syndrome and tumors of the pituitary and adrenal glands often increase levels of the adrenal gland hormones cortisol, adrenalin, and aldosterone, which can cause hypertension. Other conditions that can cause hypertension are blood vessel diseases, thyroid gland disorders, some prescribed drugs, alcoholism, and pregnancy.

Even though the cause of most hypertension is not known, some people have risk factors that give them a greater chance of getting hypertension. Many of these risk factors can be changed to lower the chance of developing hypertension or as part of a treatment program to lower blood pressure.

Risk factors for hypertension include:

- Age over 60
- Male sex
- Race
- Heredity
- Salt sensitivity
- Obesity
- Inactive lifestyle
- Heavy alcohol consumption
- Use of oral contraceptives

Some risk factors for getting hypertension can be changed, while others cannot. Age, male sex, and race are risk factors that a person can't do anything about. Some people inherit a tendency to get hypertension. People with family members who have hypertension are more likely to develop it than those whose relatives are not hypertensive. People with these risk factors can avoid or eliminate the other risk factors to lower their chance of developing hypertension. A 2003 report found that the rise in incidence of high blood pressure among children is most likely due to an increase in the number of overweight and obese children and adolescents.

Diagnosis

Because hypertension doesn't cause symptoms, it is important to have blood pressure checked regularly. Blood pressure is measured with an instrument called a sphygmomanometer. A cloth-covered rubber cuff is wrapped around the upper arm and inflated. When the cuff is inflated, an artery in the arm is squeezed to momentarily stop the flow of blood. Then, the air is let out of the cuff while a stethoscope placed over the artery is used to detect the sound of the blood spurting back through the artery. This first sound is the systolic pressure, the pressure when the heart beats. The last sound heard as the rest of the air is released is the diastolic pressure, the pressure between heart beats. Both sounds are recorded on the mercury gauge on the sphygmomanometer.

Normal blood pressure is defined by a range of values. Blood pressure lower than 120/80 mm Hg is considered normal. A number of factors such as pain, stress or anxiety can cause a temporary increase in blood pressure. For this reason, hypertension is not diagnosed on one high blood pressure reading. If a blood pressure reading is 120/80 or higher for the first time, the physician will have the person return for another blood pressure check. Diagnosis of hypertension usually is made based on two or more readings after the first visit.

Systolic hypertension of the elderly is common and is diagnosed when the diastolic pressure is normal or low, but the systolic is elevated, e.g.170/70 mm Hg. This condition usually co-exists with hardening of the arteries (atherosclerosis).

Blood pressure measurements are classified in stages, according to severity:

- Normal blood pressure: less than less than 120/80 mm Hg
- pre-hypertension: 120-129/80-89 mm Hg
- Stage 1 hypertension: 140-159/90-99 mm Hg
- Stage 2 hypertension: at or greater than 160-179/100-109 mm Hg

A typical physical examination to evaluate hypertension includes:

- Medical and family history
- Physical examination
- Chest x ray
- Electrocardiograph (ECG)
- Blood and urine tests.

The medical and family history help the physician determine if the patient has any conditions or disorders that might contribute to or cause the hypertension. A family history of hypertension might suggest a genetic predisposition for hypertension.

The physical exam may include several blood pressure readings at different times and in different positions. The physician uses a stethoscope to listen to sounds made by the heart and blood flowing through the arteries. The pulse, reflexes, and height and weight are checked and recorded. Internal organs are palpated, or felt, to determine if they are enlarged.

A chest x ray can detect an enlarged heart, other vascular (heart) abnormalities, or lung disease.

An electrocardiogram (ECG) measures the electrical activity of the heart. It can detect if the heart muscle is enlarged and if there is damage to the heart muscle from blocked arteries.

Urine and blood tests may be done to evaluate health and to detect the presence of disorders that might cause hypertension.

Classification of Hypertension

Blood Pressure Category	Systolic mm Hg (upper #)		Diastolic mm Hg (lower #)
Normal	less than 120	and	less than 80
Prehypertension	120 – 139	or	80 – 89
High Blood Pressure (Hypertension) Stage 1	140 – 159	or	90 – 99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher
Hypertensive Crisis (Emergency care needed)	Higher than 180	or	Higher than 110

- When Systolic pressure falls below 140 mm Hg indicates normal blood pressure

- When the diastolic pressure falls below 90 mm Hg which indicates normal blood pressure

Factors maintaining arterial blood pressure:

There are some factors necessary for the maintenance of the normal blood pressure which is called local factors, mechanical factors or determinants of the blood pressure These factors which are divided into the heart:

Central factors which are pertaining to the heart

Cardiac output

Heart Rate

Periphery factors which are pertaining to the blood and blood vessels :

- Peripheral resistance.
- Elasticity of arterial walls

- Blood volume.
- Capacity of vascular bed.

Therefore, cardiac output and peripheral resistance are considered more

important. Therefore, blood pressure is the product of cardiac output and peripheral resistance.

B.P = CO * PR

Thus factor affecting cardiac output will affect systolic blood pressure and

factors affecting peripheral resistance will affect diastolic blood pressure.

Cardiac output :

Cardiac output depends upon blood volume, venous return, heart rate and force of heart beat. When cardiac output increases Blood Pressure increase and when cardiac output decreases Blood Pressure decrease . As per Frank Starlings law, force of contraction of heart is directlyproportional to initial length of muscle fibers .So ,when the force of contraction is more ,cardiac output is more and the systolic pressure rises

.

Heart Rate:

Moderate changes in the heart rate do not affect arterial blood pressure much. However, marked alternation in the heart rate affects blood pressure by altering cardiac output.

Peripheral resistance :

This is the impartant , which maintains diastolic blood pressure. The diastolic blood pressure is directly propotional to peripheral resistance. This is offered to the blood flow at the periphery.The resistances offered at arterioles, which are calledresistance vessels.

Venous return:

Blood pressure is directly proportional to Venous return. When Venous Pressure increased blood pressure is increase and Venous pressure decreased blood pressures decreased

Elasticity of the arterial walls :

Blood pressure is inversely proportional to the elasticity of blood vessels. Due to the elastic property, the blood vessels are distensible and are able to maintain the pressure. When the elastic property is lost, blood pressure is increase or elastic property is decrease blood pressure decrease.

Blood volume :

Blood volume is directly proportional to blood pressure .If it increase blood pressure is increase otherwise if it decrease blood pressure is decrease.

Regulation of Blood Pressures :

The regulation of blood pressure is necessary for the proper blood supply to various organs according to the needs.

The regulation of B.P is controlled by four important mechanisms.

They are

1. Nervous mechanism.

2. Renal mechanism.

3. Endocrine mechanism.

4. Capillary fluid shift mechanism.

Nervous mechanism :(Short -Term Regulation)

It rapidly readjust the B.P in a few seconds. These are useful during exercise, emotional states and change in posture. The desired effects are due to

a) Pressoreceptor sino aortic mechanism.

b) Increased sympathetic activity and

c) Central nervous system ischaemic response.

a. Sino aortic mechanism :

This mechanism works through the baroreceptor or pressorecetor mechanism. These receptors are spray-type nerve endings that lie in the walls of the large arteries especially in the walls of the internal carotid artery, carotid sinus and the wall of the aortic arch.

If these receptors stretches due to rise in pressure, it transmits signals into the central nervous system, and "feedback" signals are then sent back through the autonomic nervous system to reduce blood pressure normally.

Baroreceptors are not stimulated by pressures between 0 and 60mmHg. But above 60mm Hg they respond progressively more rapidly and reach a maximum at about 180 mm Hg. In Chronic hypertension, the baroreceptor reflex mechanism is 'reset' to maintain the high rather than a normal blood pressure.

b.Increased sympathetic activity :

This mechanism mainly works through adrengic receptors

Namely α and β receptors. These are present in post ganglionic sympathetic nerve endings. A receptors are further classified into α1 and α2. α1 receptors present in the vascular smooth muscle leads to constriction. α2 receptors are present in the human

leucocytes and platelets and it helps to release renin from the kidney. Receptors are further classified into β1 and β2. β1 receptors present in the heart, increases the force and rate of contraction.. β2 receptor present in the bronchus leads to relaxation of bronchus.

c.Ischaemic response of the C.N.S :

Ischaemic leads to sensitisation of vasomotor centre. When B.P falls very low below 90mm, the V.M.C produces vasocontriction of vessels throughout the body. Thereby the B.P will be raised.

2. Renal Mechanism :(Long-Term Regulation)

Kidneys regulate blood pressure various mechanisms.

The important are;

a. Extracellular Fluid Volume theory.

b.Salt retention theory.

c. Renin Angiotensin theory and Renin Angiotensin-aldosterone theory.

a). ECF volume Theory:

When the blood pressure increase , kidney excrete large amounts of water and salts, particularly sodium by means of pressure diuresis and pressure natriuresis. Pressure dieresis is the excretion of large quantity of water in urine because of increase blood pressure. Even a slight increased blood pressure doubles of water excretion. Pressure natriuresis is the excretion of large quantity of sodium in urine.

Because of diuresis and natriuresis there is decrease in the ECF volume and blood volume ,which in turn bring s the arterial blood pressure back to normal level.

When blood pressure decrease, the reabsortion of water from renal tubulels in increased. This in turn,increase ECF volume, blood volumevolume and cardiac output resulting in restoration of blood pressure.

a. Salt Retention Theory :

Due to Increased intake of sodium content in salt leads to increase in extra cellular fluid which in turn raises blood volume it leads to increased arterial blood pressure.

Increased salt intake

Increased extra cellular volume

Increased arterial pressure

The hormones concerned in the regulation of B.P are

a) Catecholamines(adrenaline and nor-adrenaline)

b) Aldosterone

c) Vasopressin

a.Catecholamines, adrenaline and nor-adrenline :

These are excessively secreted during stress and strain which in turn leads to stimulation of adrenergic receptors. It leads to increased Blood Pressure.

b.Aldosterone :

Aldosterone causes retention of sodium and water thereby increase the and blood volume. Thus, an increase in the secretion of aldosterone increase the blood pressure by increase blood volume.

c.Vasopressin :

It is otherwise called as antidiuretiric hormone has a potent action on the blood Vessels particularly the arteries. It causes constriction of the blood vessels, then increase blood pressure.

MEASUREMENT OF BLOOD PRESSURE

Mercury Sphygmomanometer:

Here the pressure changes are reflected by a rise of mercury. It is an accurate method of taking Blood pressure. However, the instrument is bulky and heavy.

Technique :

1. Clothing should be removed from the arm. If it cannot be removed, it is better. To leave it as it is, rather than fold the clothing into tight constricting bands.

2. The cuff should be encircled around the arm. If the bladder does not encircle the arm completely, the centre of the bladder should be over the brachial artery. The rubber tubes from the bladder are usually placed inferiorly at the site of the brachial artery, but it would be better to place it superiorly or posteriorly so that the antecubital fossa is easily for ausculation.

3. The bell gives better sound reproduction but a diaphragm is easier to secure with the finger of one's hand and covers a large area.

4. To measure Blood Pressure in the legs a thigh cuff containing large bladder(18*24 cms) for adults should be wrapped around the thigh of the prone patient and the korotkoff sounds auscultated in the popliteal fossa in the usual way. Blood Pressure in the legs is equal to that in the arms provided the bladder is adequate in size.

5. For children, pediatric size cuff should be used.

Precautions :

1. Explain the procedure to the patient to allay anxiety.

2. Avoid exertion, meals or smoking for 30 minutes before Blood Pressure is measured. The patient must be allowed to rest for 5 minutes before Blood Pressure is measured. He should not have consumed coffee, tea for the preceding one hour or smoked for the preceding 15 minutes. He should no bladder distension.

3. The room should be warm and quiet.

4. High Blood Pressure may be erroneously recorded in an obese person because the inflatable rubber bladder may be too short for the obese arm (recommended dimensions are 12 * 35 cms). When the bladder does not completely encircle the arm the centre of the bladder must be placed directly over the brachial artery.

5. The arm must be supported to the heart level. In the supine position the arm is usually at the heart level. In sitting and standing positions the arm must be horizontal with fourth intercostal space at the heart level. Some antihypertensive agents cause postural hypotension and when this is expected, Blood Pressure must be measured in both lying and standing positions.

6. It is desirable to record the Blood Pressure in both the arms as the differences in systolic pressure exceeding 10 mm Hg between the two arms when measured simultaneously or in rapid sequence suggest obstructive lesions of aorta, innominate or subclavian arteries.

7. In vertebrobasilar insufficiency, a difference in pressure between the arms may signify that a subclavian steal is responsible for cerebrovascular symptoms.

8. Normally systolic pressure in the legs is up to 20 mm Hg higher than in the

arms, but diastolic Blood Pressure is the same.When systolic pressure in the popliteal artery exceeds that in brachial artery by > 20 mm Hg (Hill's sign), AR is usually present.

9. Measuring lower limb Blood Pressure is useful in detecting coarctation of aorta or obstructive disease of the aorta or its immediate branches..

10. The Blood Pressure may be higher in right arm by 2-10 mm Hg. Most pressures in practice are measured on the right arm. However if the Blood Pressure is higher by 10 mm Hg in one arm further measurements should be made in that arm.

11. The cuff should be snugly fitted to the arm. A cuff which is too tight may give a false lower blood pressure and a loose cuff may give a false higher Blood Pressure.

12. Repeated inflation of the cuff may cause venous congestion of the limb and elevate both systolic and diastolic Blood Pressure. To avoid this the cuff should be inflated as rapidly as possible and deflated completely between successive readings .At least 15 seconds should be allowed between successive measurements.

Clinical features :

Symptoms :

Most of the patients are asymptomatic

- Occipital headache usually in the early morning.
- Giddiness.
- Palpitation.
- Breathlessness
- Easy fatigability.
- Lack of concentration.
- Insomnia.

- Flashes of light before the eyes.
- Epistaxis.

Basic Investigations :

Blood: TC ,DC,ESR,Hb

Blood Sugar –Randum

Serum cholesterol

Blood Urea

Serum Creatinine

Urinalysis: Albumin,Sugar,Deposit

Specific Investigation:

Blood pressure monitoring

Electrocardiogram

Lipid profile

Chest x-Ray

Prevention and management of Hypertension:

1. The goal of anti hypertension therapy is the reduction of cardiovascular and renal morbidity and mortality, with focus on controlling the systolic blood pressure ,as most patients will achieve diastolic blood pressure control when the systolic blood pressure is achieved.

2. In the patients younger than 80 years, the systolic blood pressure target should be 140 to 150mmHg ,patients with diabetes should be treated to blow 85mmHg diastolic Blood pressure. 3. Body Mass Index (MBI)should be reduced to 25 kg/m2.

4. Patients was advised to avoid the food which increases the pitthakutram and to avoid bitter guard sesbania leaves, which interfere the action of drug

.5. Diet restriction is needed to prevent hypertension, fat content of diet should be low and saturated fat was avised.

6. Cessation of Alcohol, cigratte smoking and excessive use of Tea, Coffee, needed to check.

7. Patients were advised to maintaining a normal sleep pattern to get rid of stress.

8. Patients were advised to take Garlic and vitamin –E containing diet due to their Anti cholesterol actions.

9. Aerobic exercise for 15-20 minutes help in the management of associated Cardiac risk factors.

Treatment:

There is no cure for primary hypertension, but blood pressure can almost always be lowered with the correct treatment. The goal of treatment is to lower blood pressure to levels that will prevent heart disease and other complications of hypertension. In secondary hypertension, the disease that is responsible for the hypertension is treated in addition to the hypertension itself. Successful treatment of the underlying disorder may cure the secondary hypertension.

Guidelines advise that clinicians work with patients to agree on blood pressure goals and develop a treatment plan for the individual patient. Actual combinations of medications and lifestyle changes will vary from one person to the next. Treatment to lower blood pressure may include changes in diet, getting regular exercise, and taking antihypertensive medications. Patients falling into the pre-hypertension range who don't have damage to the heart or kidneys often are advised to make needed lifestyle changes only. A 2003 report of a clinical trial showed that adults with elevated blood pressures lowered them as mush as 38% by making lifestyle changes and participating in the DASH diet, which encourages eating more fruit and vegetables.

Lifestyle changes that may reduce blood pressure by about 5 to 10 mm Hg include:

- reducing salt intake
- reducing fat intake
- losing weight
- getting regular exercise
- quitting smoking
- reducing alcohol consumption
- managing stress

Patients whose blood pressure falls into the Stage 1 hypertension range may be advised to take antihypertensive medication. Numerous drugs have been developed to treat hypertension. The choice of medication will depend on the stage of hypertension, side effects, other medical conditions the patient may have, and other medicines the patient is taking.

If treatment with a single medicine fails to lower blood pressure enough, a different medicine may be tried or another medicine may be added to the first. Patients with more severe hypertension may initially be given a combination of medicines to control their hypertension. Combining antihypertensive medicines with different types of action often controls blood pressure with smaller doses of each drug than would be needed for just one.

Anti hypertensive medicines fall into several classes of drugs:

- Diuretics
- Beta-blockers
- Calcium channel blockers
- Angiotensin converting enzyme inhibitors (ACE inhibitors)
- Alpha-blockers
- Alpha-beta blockers
- Vasodilators
- Peripheral acting adrenergic antagonists
- Centrally acting agonists

Diuretics help the kidneys eliminate excess salt and water from the body's tissues and the blood. This helps reduce the swelling caused by fluid buildup in the tissues. The reduction of fluid dilates the walls of arteries and lowers blood pressure. New guidelines released in 2003 suggest diuretics as the first drug of choice for most patients with high blood pressure and as part of any multi-drug combination.

Beta-blockers lower blood pressure by acting on the nervous system to slow the heart rate and reduce the force of the heart's contraction. They are used with caution in patients with heart failure, asthma, diabetes, or circulation problems in the hands and feet.

Calcium channel blockers block the entry of calcium into muscle cells in artery walls. Muscle cells need calcium to constrict, so reducing their calcium keeps them more relaxed and lowers blood pressure.

ACE inhibitors block the production of substances that constrict blood vessels. They also help reduce the build-up of water and salt in the tissues. They often are given to patients with heart failure, kidney disease, or diabetes. ACE inhibitors may be used together with diuretics.

Alpha-blockers act on the nervous system to dilate arteries and reduce the force of the heart's contractions.

Alpha-beta blockers combine the actions of alpha and beta blockers.

Vasodilators act directly on arteries to relax their walls so blood can move more easily through them. They lower blood pressure rapidly and are injected in hypertensive emergencies when patients have dangerously high blood pressure.

Peripheral acting adrenergic antagonists act on the nervous system to relax arteries and reduce the force of the heart's contractions. They usually are prescribed together with a diuretic. Peripheral acting adrenergic

Centrally acting agonists also act on the nervous system to relax arteries and slow the heart rate. They are usually used with other antihypertensive medicines.

Prognosis:

There is no cure for hypertension. However, it can be well controlled with the proper treatment. Therapy with a combination of lifestyle changes and antihypertensive medicines usually can keep blood pressure at levels that will not cause damage to the heart or other organs. The key to avoiding serious complications of hypertension is to detect and treat it before damage occurs. Because antihypertensive medicines control blood pressure, but do not cure it, patients must continue taking the medications to maintain reduced blood pressure levels and avoid complications.

TRIAL DRUG

TRIAL DRUG

PUDHINA THEENEER

INGREDIANTS:

- Puthina leaves (*Mentha arvensis*)
- Water

PREPARATION :-

- The shade dried leaves of pudhina (800 gms) are put in the mud pot add 6000 ml of water and keep aside in one night
- Next day will transfer into the theeneer valai instrument making 3000 ml of theeneer

DOSAGE :- 15 – 35 ml, 2-3 times daily before food.

DURATION :- 48 Days (1 mandalam)

REFERENCE: Sigicha Rathna Deepam– Part-1

Kannusamy Pillai-Rathna Naayakar & Sons

Thanjavur.

PUDHINA

TRIAL MEDICINE

PUDHINA THEENEER

MATERIALS AND METHODS

MATERIALS AND METHODS

STUDY DESIGN:

The open clinical trial on **URATHA PITHAM (Hypertension**) was conducted at the OPD section of postgraduate, pothu maruthuvam department attached to Arignar Anna hospital of Indian medicine, chennai-106, during the period 2014- 2017.

STUDY CENTRE:

The entire study was conducted on patients at out patient Department of Govt Siddha Medical college, Chennai in the premises of Arignar Anna Government Hospital for Indian medicine and Homeopathy,Arumbakkam,Chennai-106,during the period of 2015-2017.

SAMPLE SIZE:

The sample size was 40 patients.

INCLUSION CRITERIA

- Age 18-60 years
- Blood pressure level above 140/90mm Hg and 180/100mmHg
- Fatigue
- Nausea
- Insomnia
- Giddiness
- Palpitation
- Headache
- Sweating
- Obesity

EXCLUSION CRITERIA

- Age group less than 18 and above 60 years
- K/C/O Hypertension in pregnancy
- K/C/O Associated other secondary diseases like renal failure, CCF, other cardiac problems, chronic diseases
- K/C/O Diabetes mellitus.
- Blood pressure level below 140/90mmHg and above 180/100mmHg

WITH DRAWAL CRITERIA

- Development of severe adverse drug reactions
- Occurrence of any other serious illness
- Patients turned unwilling to continue in the course of clinical trial

EVALUATION OF CLINICAL PARAMETERS:

Patients are clinically evaluated by following parameters

.

HISTORY TAKING:

Age, Occupation, Socio economic status, Complaints and duration, Previous illness, Family history, Personal habits were recorder in the case sheet for every patient at the time of first visit to the OP

INVESTIGATIONS:

Blood:

- TC,
- DC,
- ESR,
- Hb
- Blood sugar (Random)

- Blood Urea,
- Serum Creatinine

Urine:

- Albumin,
- Sugar,
- Deposit

Specific Investigations:

- BP Monitoring
- Electrocardiogram
- Lipid profile
- X-ray chest

CLINICAL DIAGNOSIS BASED ON SIDDHA SYSTEM :

The parameters used to diagnose the disease Uratha pitham based on siddha system are:

- Poriaalaridhal
- Pulanaalaridhal
- Vinaadhal
- Uyirthathukkal
- Udalthathukkal

Envagaithervu: Naa, Niram, Mozhi, Vizhi, Sparisam, Malam, Moothiram,

- Naadi.

Neerkuri: Niram,Manam, Nurai, Enjal, Edai

RESULTS

AND

OBSERVATION

RESULTS AND OBSERVATION

A total number of 40 patients included in the study with signs and symptoms of Uratha pitham were selected and treated from PG Maruthuvam Department Govt Siddha Medical College, Chennai – 106 during the period of 2014-2017

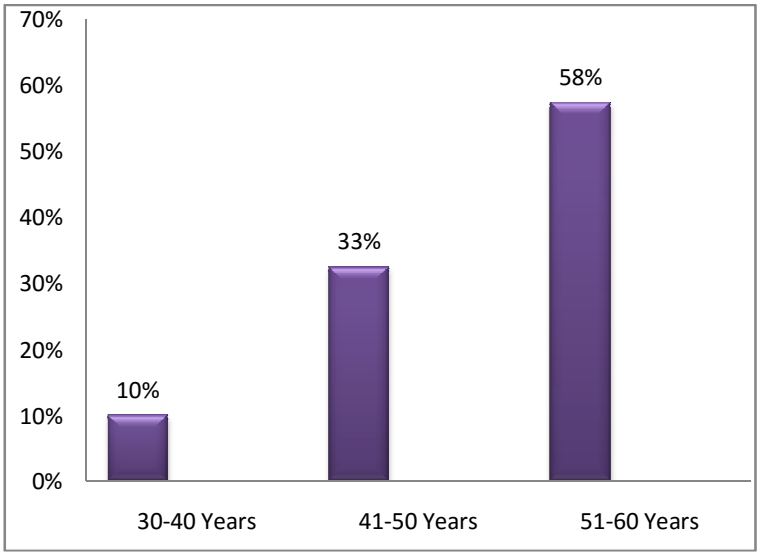
The observations were tabulated regarding the following conditions.

1. Age Distribution
2. Sex Distribution
3. Thinai Distribution
4. Kaalam Distribution
5. Occupational status
6. Socio economic stastus
7. Food habits
8. Personal habits
9. Clinical Symptoms
10. Distribution of Vatham
11. Distribution of Pitham
12. Distribution of Kabam
13. EzhuUdalKattugal
14. EnvagaiThervugal
15. Naadi nadai
16. Neikuri
17. Clinical progress
18. Effect on Blood Pressure
19. Results

1.AGE DISTRIBUTION

AGE IN YEARS	NO OF CASES	PERCENTAGE
30 - 40	4	10%
41- 50	13	32.5%
51- 60	23	57.5%

AGE DISTRIBUTION



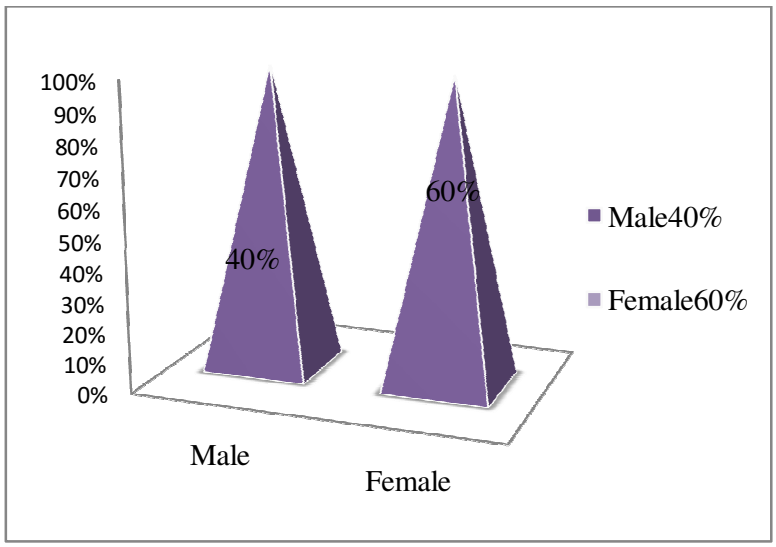
Inference:

Out of 40 patients, majority of the cases that is 23(57.5%) were in 51-60 years age group, 32.5% were in 41-50 years age group 10% of cases were in 30-40 years age group.

2.SEX DISTRIBUTION

AGE IN YEARS	No. OF CASES	PERCENTAGE
Male	16	40%
Femal	24	60%

SEX DISTRIBUTION

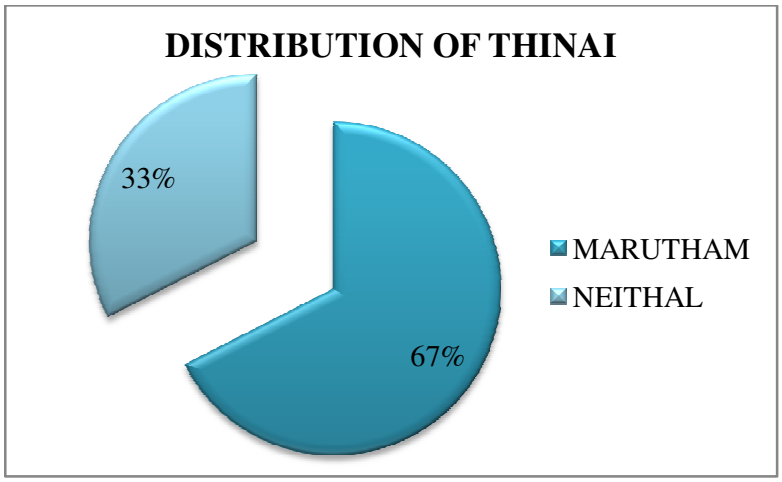


Inference:

Out of 40 patients, majority of the cases that is 24(60%) were female and minority of the cases that is 16(40%) were male.

3.DISTRIBUTION OF THINAI

THINAI	NO.OF CASES	PERCENTAGE
KURINIJI	0	0%
MULLAI	0	0%
MARUHAM	27	67.5%
NEITHAL	13	32.5%
PALAI	0	0%

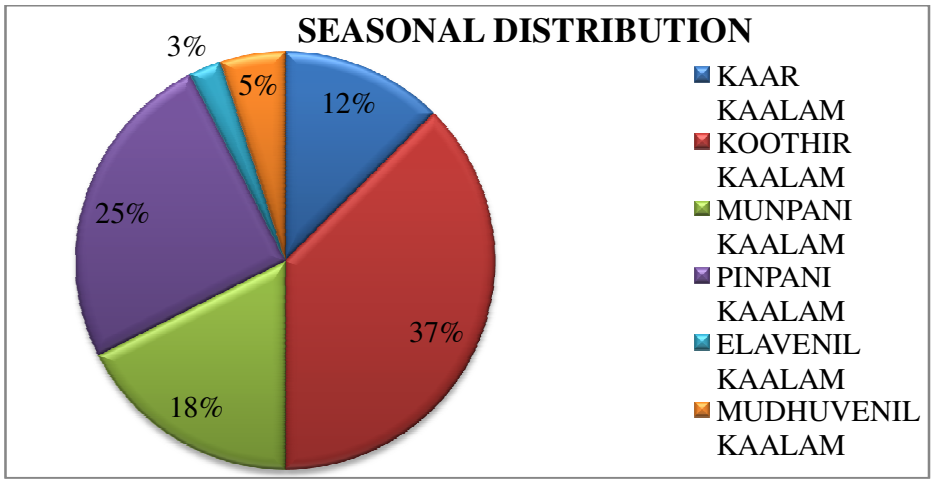


Inference:

Out of 40 patients, 27(67.5%) comes under Marutham and 13(32.5%) comes under Neithal.

4.DISTRIBUTION OF KAALAM

KALLAM	MONTH(MAADHAM)	NO OF CASES	PERCENTAGE
Kaar Kaalam	(Avani-purattasi) (Aug 16 – Oct 15)	5	12.5%
Koothir Kaalam	(Aippasi-Karthigai) (Oct 16 – Dec 15	15	37.5%
Munpani Kaalam	(Maarazhi – Thai) (Dec 16 – Feb 15	7	17.5%
Pinpani Kaalam	(Masi – Panguni) (Feb 16 – Apr 15	10	25%
Elavenil Kaalam	(Chithirai – Vaikasi) (Apr 15 – Jun 15	1	2.5%
Mudhuvenil Kaalam	Aani – Aadi) (June 16 – Aug 15	2	5%

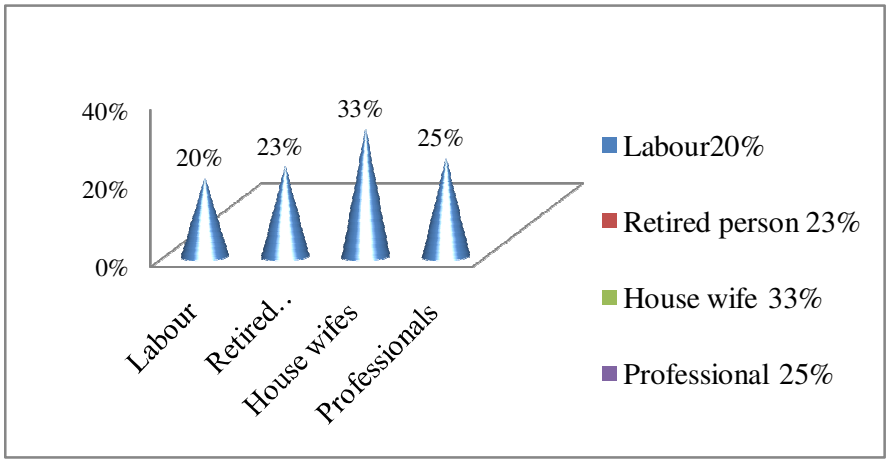


Inference:

As per Tamil seasonal classification highest incidence of 37.5% (15) of cases were noted in Koothir kaalam, 25% (10) cases were noted in pinpani kaalam, 17.5% (7) of cases were noted in Munpani kaalam, 12.5% (5) of cases were noted in Kaar kaalam, 5% (2) of cases were noted in Mudhuvenil kaalam and 2.5 (1) of cases were noted in Elavenil kaalam.

5.OCCUPATIONAL STATUS

NATURE OF WORK	NO. OF CASES	PERCENTAGE
Labour	8	20%
Retired persons	9	22.5%
House – Wifes	13	32.5%
Professionals	10	25%

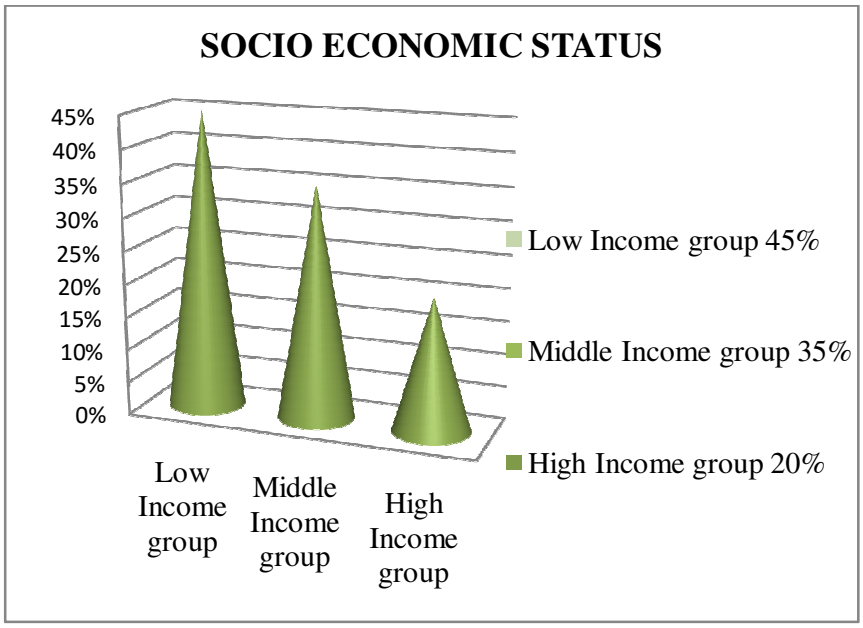


Inference:

Since Occupational history is closely relatives with the exaggeration of the condition, detailed history was made and tabulated 20% were Labours, 23% were retired persons, 32.5.% were House wifes and 25% were professionals.

6.SOCIO ECONOMIC STATUS

NATUR OF WORK	NO OF CASES	PERCENTAGE
Low Income group (upto Rs.2,00,000/Annum)	18	45%
Middle Income group (Rs.2,00,000 – 5,00,000/Annum)	14	35%
High Income group (Above Rs.5,00,000/Annum)	8	20%

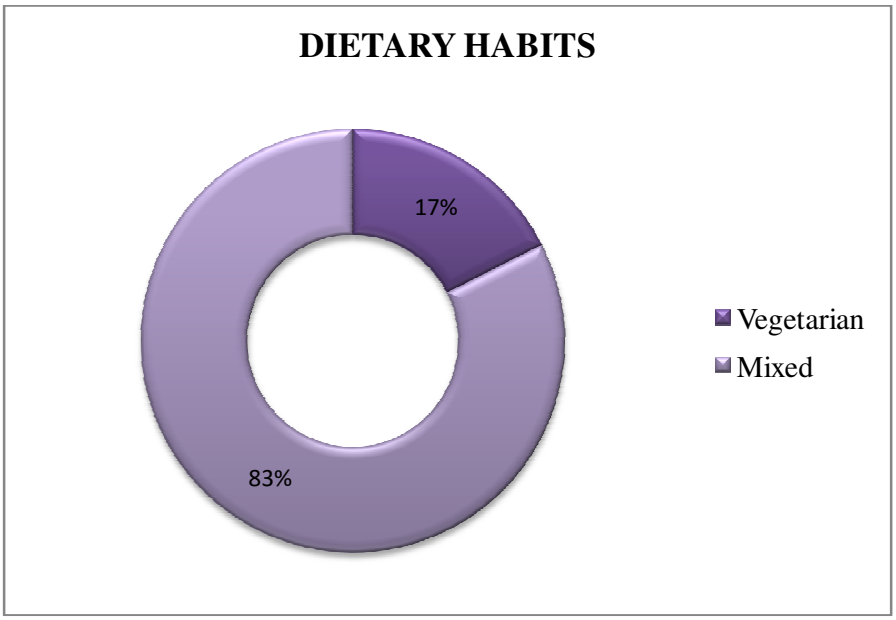


Inference:

Out of 40 cases majority cases were recorded in low income group (45%), 35% cases from middle Income group and 20% cases from High Income group.

7.DIETARY HABITS

DIETARY HABITS	NO.OF CASES	PERCENTAGE
VEGETARIAN	7	17.5%
MIXED	33	82.5%

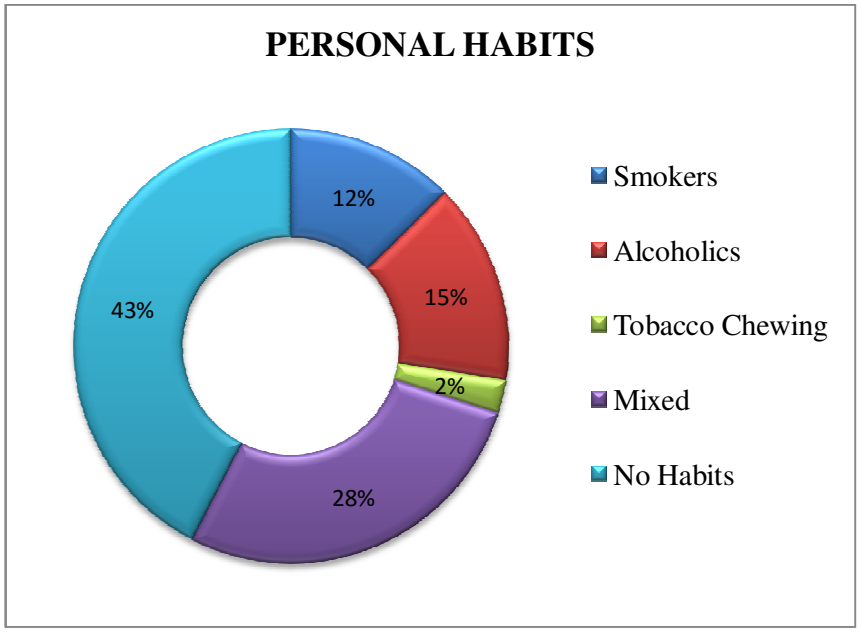


Inference:

Out of 40 patients, 33 (82.5%) patients were Consumed mixed diet and 7 patients (17.5%) were consumed Vegetarian diet.

8.PERSONAL HABITS

PERSONAL HABITS	NO.OF CASES	PERCENTAGE
Smokers	5	12.5%
Alcoholics	6	15%
Tobacco Chewing	1	2.5%
Mixed	11	27.5%
No Habits	17	42.5%

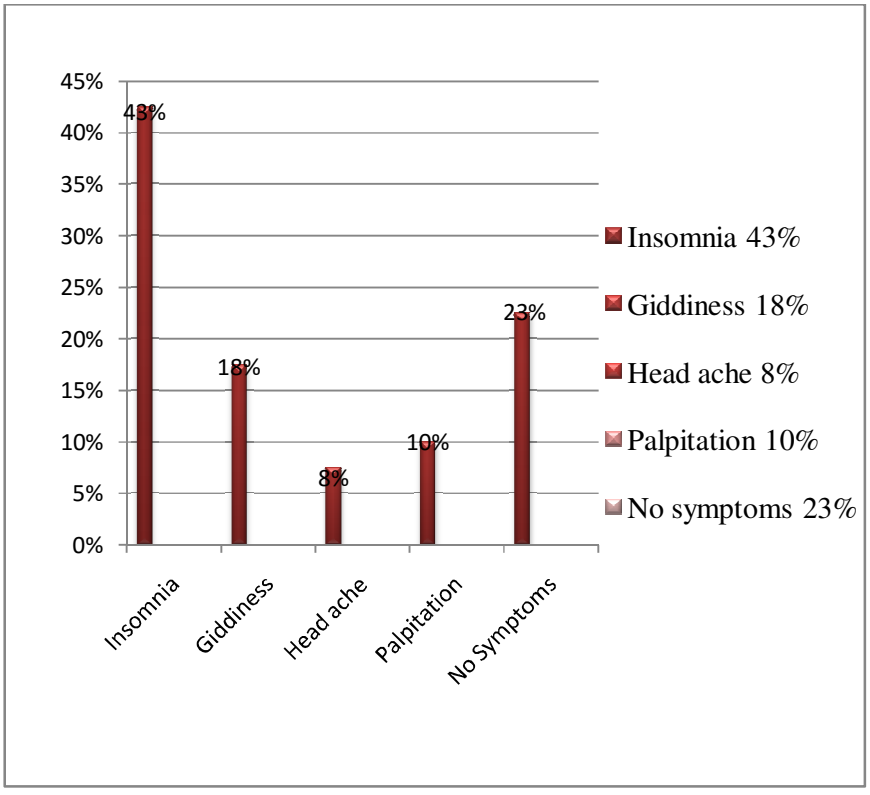


Inference:

Out of 40 patients, 5(12.5%) patients were Smoking, 6(15%) were Alcoholics, 1(2.5%) were Tobocco chewing, 11(27.5) were Mixed habits and 17(42.5%) were no Habits.

9.SYMPTOMS

SYMPTOMS	NO. OF CASES	PERCENTAGE
Insomnia	17	42.5%
Giddiness	7	17.5%
Headache	3	7.5%
Palpitation	4	10%
No Symptoms	9	22.5%

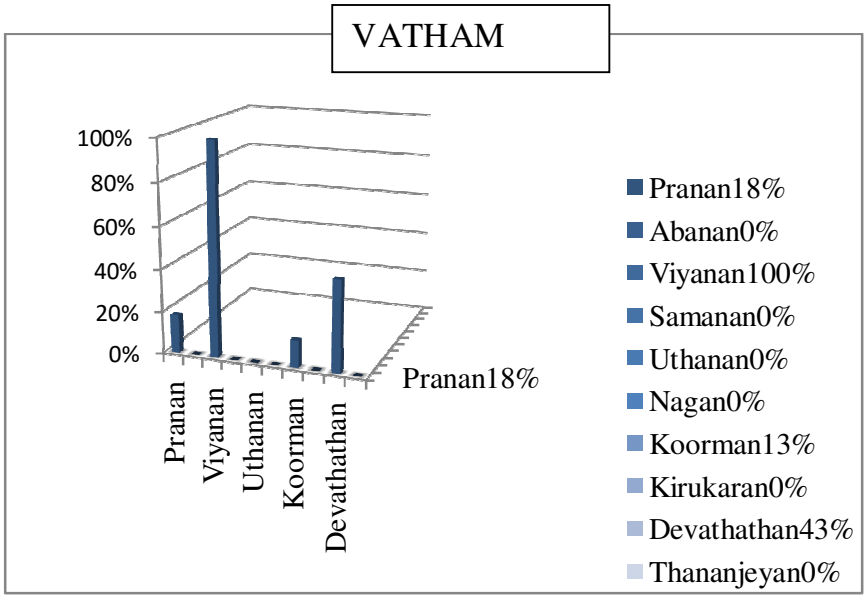


Inference:

Out of 40 patients, 17 patients (42.5%) were affected Insomnia, 7(17.5%) patients were affected Giddiness, 3(7.5%) patient affected Head ache, 4(10%) patients affected palpitation and 9(22.5%) no symptoms.

10.DISTRIBUTION OF VATHAM

VATHAM	NO.OF CASES	PERCENTAGE
Pranan	7	17.5%
Abanan	0	0%
Viyanan	40	100%
Samanan	0	0%
Uthanan	0	0%
Nagan	0	0%
Koorman	5	12.5%
Kirukaran	0	0%
Devathathan	17	42.5%
Thananjeyan	0	0%

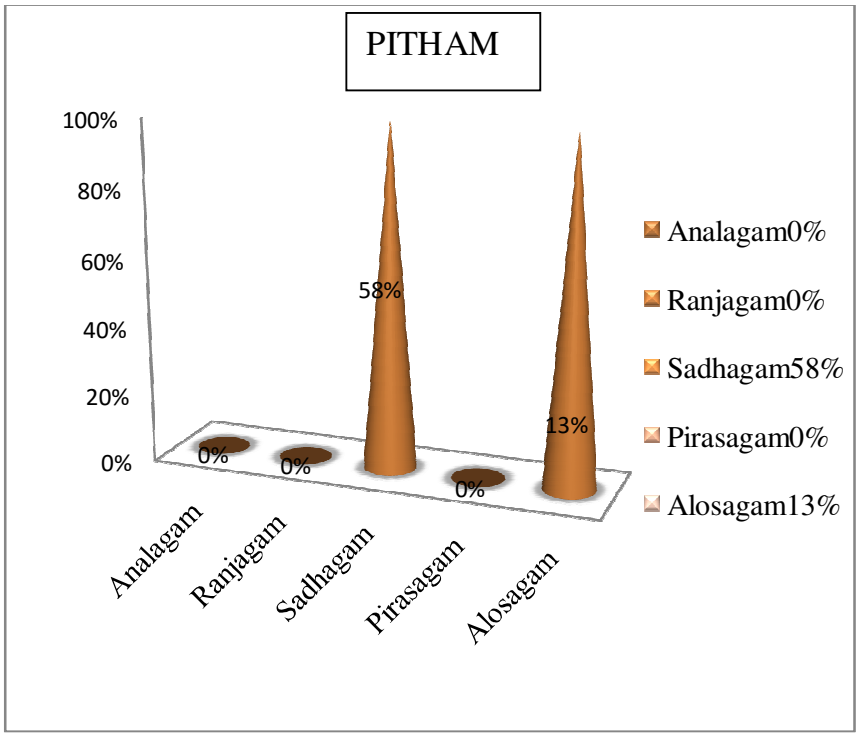


Inference:

Pranan affected 7(17.5%), Viyanan affected in all patients (100%), Koorman affected 13% and Devathathan affected in 17 patients (42.5.%).

11 .DISTRIBUTION OF PITHAM

PITHAM	NO.OF CASES	PERCENTAGE
Analagam	0	0%
Ranjagam	0	0%
Sathagam	23	57.5%
Pirasagam	0	0%
Alosagam	5	12.5%

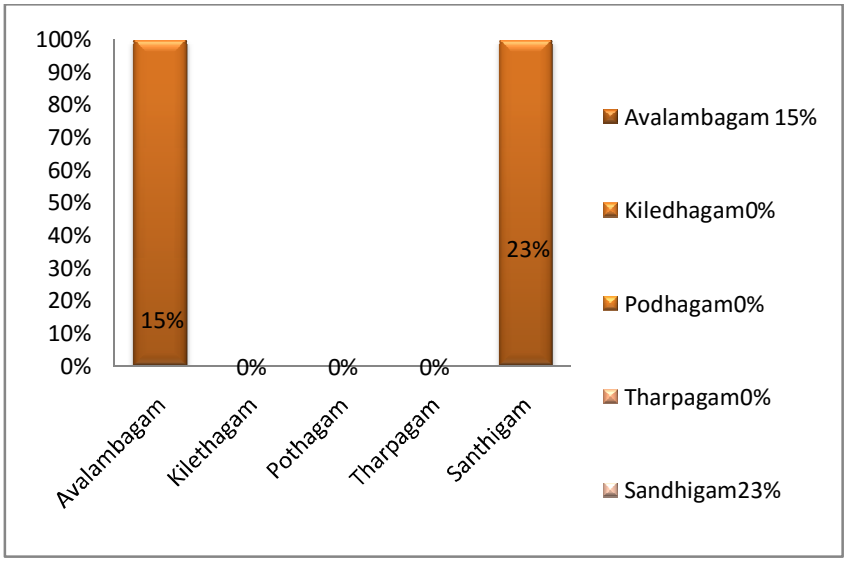


Inference:

Pranan affected 7(17.5%), Viyanan affected in all patients (100%), Koorman affected 13% and Devathathan affected in 17 patients (42.5.%).

12 .DISTRIBUTION OF KABAM

KABAM	NO.OF CASES	PERCENTAGE
Avalambagam	7	17.5%
Kilethagam	0	0%
Pothagam	0	0%
Tharpagam	0	0%
Santhigam	9	22.5%

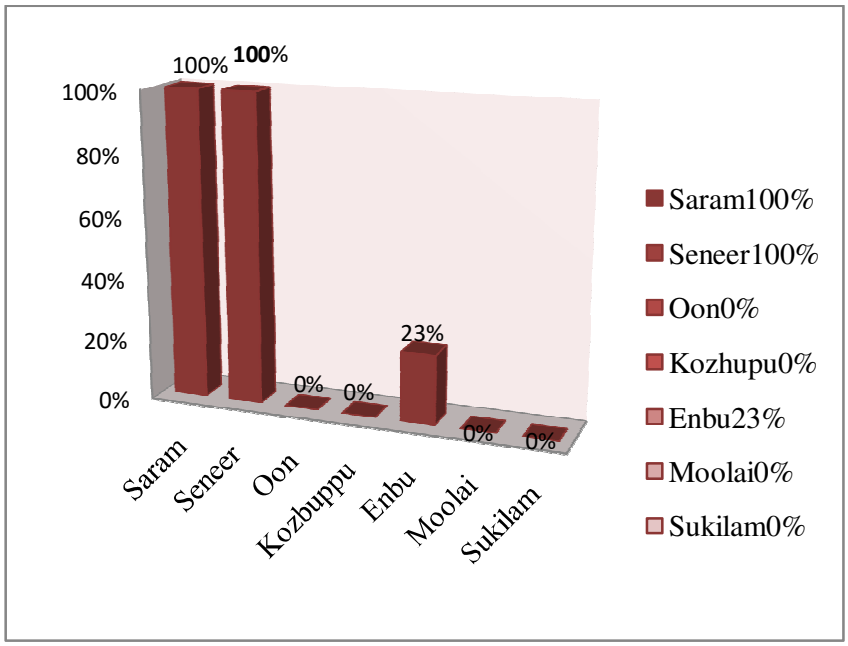


Inference:

Out of 40 Patients, Avalamagam affected in 6 (15%) patients, Santhigam affected in 9 (22.5%) patients.

13 .EZHU UDAL THATHUKKAL

EZHUUDAL THATHUKKAL	NO.OF CASES	PERCENTAGE
Saram	40	100%
Seneer	40	100%
Oon	0	0%
Kozbuppu	0	0%
Enbu	9	22.5%
Moolai	0	0%
Sukilam	0	0%

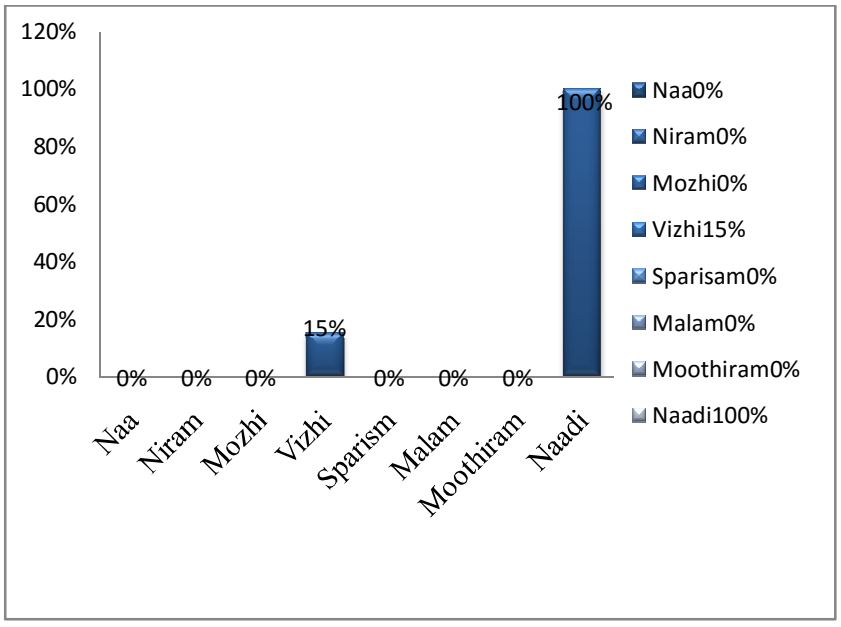


Inference:

Out of 40 patients, Saram and Seneer affected in all patients (100%)and enbu were affected in 22.5%.

14 .ENN VAGAI THERVUGAL

ENNVAGAI THERVUGAL	NO. OF CASES	PERCENTAGE
Naa	0	0%
Niram	0	0%
Mozhi	0	0%
Vizhi	5	12.5%
Sparism	0	0%
Malam	0	0%
Moothiram	0	0%
Naadi	40	100%

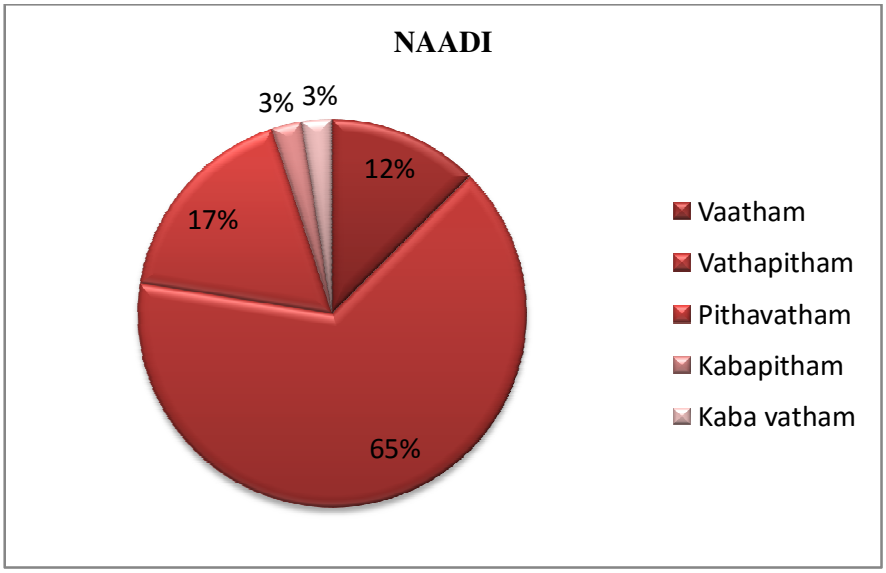


Inference:

Vizhi were affected in 5(12.5%) patients, Naadi affected in all patients.

15.**NAADI**

NAADI	NO.OF CASES	PERCENTAGE
Vaatham	5	12.5%
Vathapitham	26	65%
Pithavatham	7	17.5%
Kabapitham	1	2.5%
Kaba vatham	1	2.5%

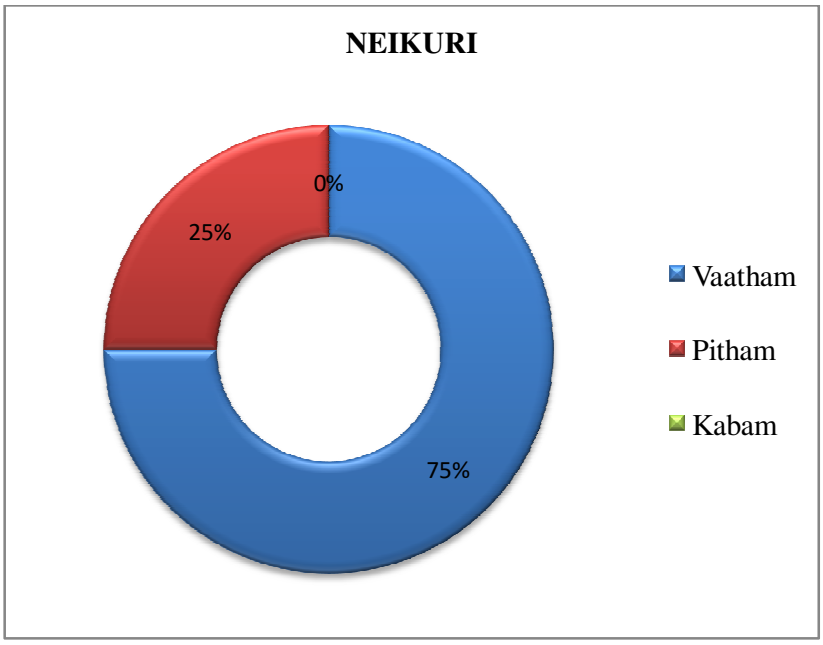


Inference:

26 (65%) of cases had Vathapitham Naadi, 7 (17.5%) of cases had pitha Vatham, 5 (12.5%) of cases had Vatham, each 1 (2.5%) of cases had kaba pitham and kaba vatham.

16.NEIKURI

NEIKURI	NO. OF CASES	PERCENTAGE
Vatham (Snake like)	30	75%
Pitham (Ring like)	10	25%
Kabam (Pearl like)	0	0%



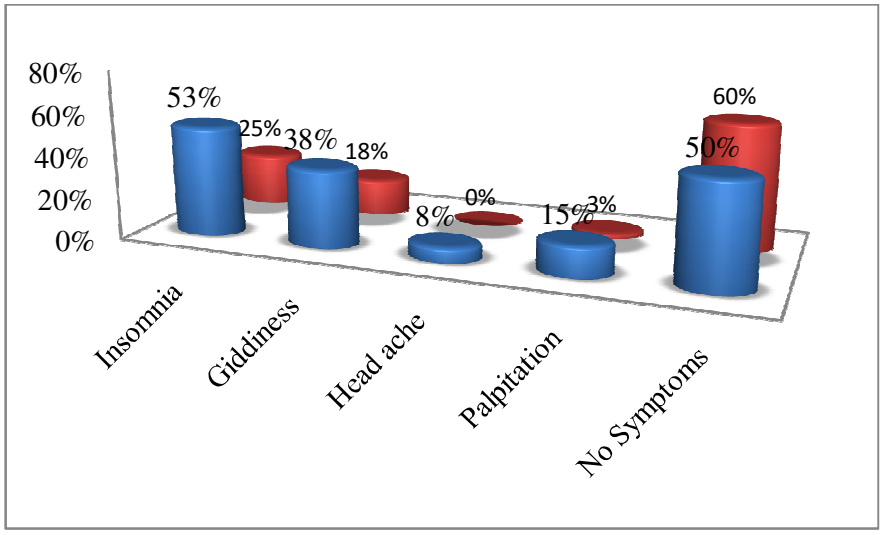
Inference:

Out of 40 patients, 30 patients (75%) had Vatha Neer, 10 (25%) had Pitha Neer.

17.CLINICAL PROGRESS

Sl.No.	SYMPTOMS	No. OF CASES		PERCENTAGE (%)	
		BT	AT	BT	AT
1	Insomnia	21	10	52.50%	25%
2	Giddiness	15	7	37.50%	17.50%
3	Head ache	3	0	7.5%	0%
4	Palpitation	6	1	15%	2.50%
5	No Symptoms	20	24	50%	60%

CLINICAL PROGRESS



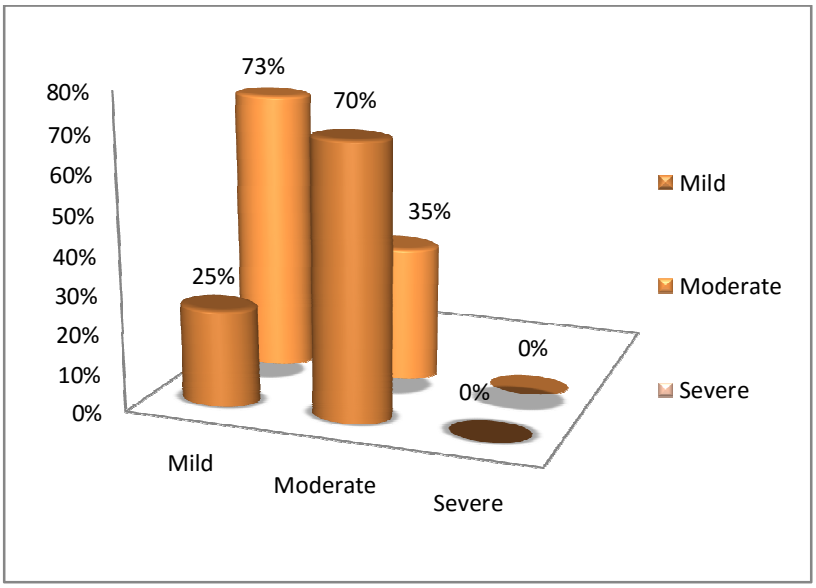
Inference:

Insomnia were affected in 21 (52.5%) patients before treatment and after treatment it was improved in 10 (25%) Giddiness were affected 15 (37.5%) patients in before treatment and after treatment it was improved in 7 (17.5%) patients, Head ache were affected 3 (7.5%) patients in before treatment and after treatment, it was improve 0% patients. Palpitation is were affected 6 (15%) patients in before treatment and after treatment it was improved 1 (2.5%) patients.

18 .EFFECT ON BLOOD PRESSURE

Sl.No.	HYPERTENSION	No. OF CASES		PERCENTAGE (%)	
		BT	AT	BT	AT
1	Mild (120-129/80-89mmHg)	10	29	25%	72.5%
2	Moderate (140 mm Hg)	28	14	70%	35%
3	Severe (>180-110mm Hg)	0	0	0%	0%

EFFECT ON BLOOD PRESSURE

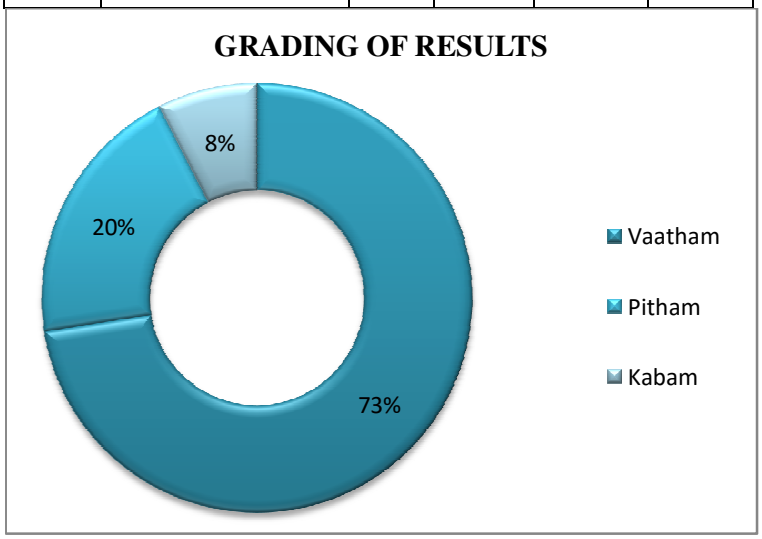


Inference:

Out of the 40 patients, Mild affected patients 10 (25%) in before treatment and after treatment 29 (72.5%) patients were improved and moderate affected patients 28 (70%) in before treatment and after treatment 14 (35%) were improved.

19 .GRADING OF RESULTS

Sl.No.	HYPERTENSION	No. OF CASES		PERCENTAGE (%)	
		BT	AT	BT	AT
1	Mild (120-129/80-89mmHg)	10	29	25%	72.5%
2	Moderate (140 mm Hg)	28	14	70%	35%
3	Severe (>180-110mm Hg)	0	0	0%	0%



Inference:

Out of 40 patients, 29 (72.5%) shows good result, 8 cases (20%) shows moderate results, 3 cases (7.5%) shows poor result.

LABORATORY INVESTIGATION REPORT OF THE PATIENTS

Sl. No.	O.P No.	Age / Sex	Before Treatment				After Treatment				ESR (mm)				Hb (gms%)		Urine Analysis					
			TC	DC			TC	DC			BT		AT		BT	AT	BT			AT		
			Cu/mm	P %	L %	E %	Cu/mm	P %	L %	E %	1/2 Hr	1 Hr	1/2 Hr	1 Hr			Alb	Sug	Dep	Alb	Sug	Dep
1	3176	52/F	7400	70	24	6	8100	65	25	4	18	38	15	32	14.6	15.1	N	N	FP	N	N	FP
2	9994	45/F	7100	55	32	8	7200	61	30	6	14	30	17	35	7.1	10.5	N	N	FE	N	N	FE
3	1153	60/M	8800	53	38	9	8100	50	28	5	3	10	5	10	9.4	11	N	N	FP	N	N	FE
4	822	55/F	6700	65	29	6	7200	58	30	3	12	20	11	15	12.5	13	N	N	FP	N	N	FP
5	2486	45/F	7800	74	32	2	9200	65	28	4	20	30	15	30	11	11.5	N	N	FE	N	N	FE
6	4973	60/F	6900	64	32	4	7200	56	22	5	15	32	10	20	12.9	12	N	N	FE	N	N	FE
7	5059	37/F	7500	51	41	8	7300	48	35	4	13	22	11	15	11.7	13	N	N	FP	N	N	FP
8	4694	58/M	8200	59	38	4	8500	59	36	7	5	8	7	9	13.5	15	N	N	FE	N	N	FE
9	2221	58/M	9100	64	30	4	9200	53	32	7	3	7	5	8	10.6	12	N	N	FP	N	N	FE
10	823	49/F	8800	55	37	6	9100	51	37	8	11	15	7	12	11.5	13	N	N	FE	N	N	FE
11	9320	45/F	7700	61	28	7	8200	56	32	5	7	12	5	7	8.6	7.5	N	N	FE	N	N	FP
12	3189	50/M	9200	60	35	3	8500	52	41	4	3	10	7	13	12	13.5	N	N	FP	N	N	FP
13	842	60/F	9900	71	40	8	9600	67	30	9	11	20	8	15	9.8	11	N	N	FE	N	N	FE
14	9364	55/M	8700	57	31	7	9100	62	35	8	4	8	6	21	13	13	N	N	FE	N	N	FE
15	1412	48/M	10100	65	34	5	9800	55	37	9	6	10	6	13	9	11	N	N	FP	N	N	FP
16	2260	60/F	9400	72	41	9	9500	68	37	9	12	21	11	17	11.5	12	N	N	FE	N	N	FP
17	7915	55/F	8200	58	29	6	9200	57	32	9	15	35	12	31	13	12.5	N	N	FP	N	N	FE
18	8127	50/F	7900	97	41	8	8500	69	38	8	12	22	12	19	8.5	10	N	N	FE	N	N	FE
19	1286	60/F	9100	56	34	5	9200	61	27	7	14	25	11	25	10	11	N	N	FP	N	N	FE
20	5156	55/M	10600	61	31	6	10000	58	35	4	35	23	27	51	11.5	12	N	N	FE	N	N	FE

BT – Before Treatment, AT – After Treatment, N – Nil, TC – Total Blood Count, DC – Differential Blood Count,
P –Polymorphslymorphs, L – Leucocytes, E – Eosinophils, ESR – Erythrocytes Sedimentation Rate, mm – Milli meter
Hb – Hemoglobin, Alb – Albumin, Sug – Sugar, Dep– Deposits, FE – Few Epithelial cells, FP – Few Pus cells

LABORATORY INVESTIGATION REPORT OF THE PATIENTS

Sl. No.	O.P No.	Age / Sex	Before Treatment				After Treatment				ESR (mm)				Hb (gms%)		Urine Analysis					
			TC	DC			TC	DC			BT		AT		BT	AT	BT			AT		
			Cu/mm	P %	L %	E %	Cu/mm	P %	L %	E %	1/2 Hr	1 Hr	1/2 Hr	1 Hr			Alb	Sug	Dep	Alb	Sug	Dep
21	5244	31/M	10600	57	27	5	9500	56	27	6	20	40	16	31	12	11	N	N	FP	N	N	FP
22	5155	50/F	9400	65	29	6	9400	62	27	5	21	42	15	29	13	11.5	N	N	FP	N	N	FE
23	6308	56/F	8000	54	31	4	9200	54	35	5	2	4	2	5	13	11	N	N	FE	N	N	FE
24	3245	55/F	10200	61	31	5	10100	62	33	5	30	50	21	40	14	14.5	N	N	FE	N	N	FE
25	4171	60/M	7100	59	35	1	8300	58	39	2	5	8	3	9	10	11.5	N	N	FP	N	N	FP
26	5068	40/M	8900	61	33	7	8600	60	37	6	4	9	5	17	13	14	N	N	FE	N	N	FP
27	5114	55/M	8500	53	34	4	9000	54	31	7	21	38	20	40	12	11	N	N	FP	N	N	FE
28	4624	53/F	9700	65	30	3	9700	64	31	5	25	48	19	41	13.6	12.5	N	N	FE	N	N	FP
29	1656	55/F	8200	71	32	8	9100	68	41	7	17	28	12	31	14.2	13	N	N	FP	N	N	FE
30	7616	52/F	7900	67	40	9	8000	64	37	8	36	74	28	53	11.8	13	N	N	FE	N	N	FE
31	1152	60/F	9500	61	33	9	9700	61	40	7	15	25	11	28	12	12.8	N	N	FE	N	N	FP
32	1713	50/F	8900	70	45	3	8500	65	41	7	13	21	13	28	12	14	N	N	FP	N	N	FP
33	9147	35/M	7100	59	33	8	8300	64	29	4	22	38	15	25	10	11.5	N	N	FE	N	N	FP
34	9033	58/M	10200	67	38	5	9800	67	41	3	15	29	19	30	12	13	N	N	FP	N	N	FE
35	5157	50/M	9300	56	27	9	9300	63	28	9	30	58	23	41	13	11.5	N	N	FP	N	N	FP
36	2413	47/F	8100	60	34	4	7900	61	13	7	20	40	15	30	10.4	11.5	N	N	FE	N	N	FE
37	5275	49/F	7800	73	39	9	7500	71	29	6	13	26	18	40	9.5	12	N	N	FP	N	N	FP
38	6642	55/M	10100	61	31	7	10000	55	32	8	17	30	21	45	8.6	10	N	N	FE	N	N	FP
39	1659	50/F	9100	70	28	8	8500	71	28	8	30	56	23	41	9	11	N	N	FP	N	N	FE
40	387	54/M	8000	57	26	3	9200	57	28	5	36	72	25	50	12	12.5	N	N	FE	N	N	FE

BT – Before Treatment, AT – After Treatment, N – Nil, TC – Total Blood Count, DC – Differential Blood Count, P –Polymorphslymorphs, L – Leucocytes, E – Eosinophils, ESR – Erythrocytes Sedimentation Rate, mm – Milli meter Hb – Hemoglobin, Alb – Albumin, Sug – Sugar, Dep– Deposits, FE – Few Epithelial cells, FP – Few Pus cells

BIO CHEMICAL REPORTS OF THE PATIENTS

Sl. No.	O.P No.	Age / Sex	Blood Sugar		Blood Urea		Serum Cholosterol		Serum Creatinine	
			BT	AT	BT	AT	BT	AT	BT	AT
1	3176	52/F	90	100	21.3	21	190	179	0.7	0.8
2	9994	45/F	138	110	15	13	155	130	1.2	1.0
3	1153	60/M	75	90	28	23	168	173	1.0	1.1
4	822	55/F	142	110	22	19	160	130	1.1	1.0
5	2486	45/F	90	110	34	38	190	192	0.7	0.9
6	4973	60/F	134	124	23	23	153	150	0.6	0.6
7	5059	37/F	65	90	25	29	156	161	0.6	0.9
8	4694	58/M	87	96	29	28	170	172	0.9	1.1
9	2221	58/M	127	120	32	30	163	171	0.8	0.9
10	823	49/F	78	85	27	28	178	173	1.0	1.0
11	9320	45/F	85	80	23	27	180	181	0.8	1.0
12	3189	50/M	89	90	31	34	192	195	1.1	1.0
13	842	60/F	82	95	29	31	155	158	0.6	0.9
14	9364	55/M	80	92	20	21	148	139	1.2	1.0
15	1412	48/M	81	87	16	19	173	168	0.9	0.7
16	2260	60/F	108	115	23	25	169	160	1.0	1.0
17	7915	55/F	100	112	35	33	210	181	1.2	1.0
18	8127	50/F	116	123	28	26	196	182	0.9	0.7
19	1286	60/F	72	81	15	13	174	167	0.8	0.6
20	5156	55/M	110	115	21	22	167	158	1.0	0.9

BIO CHEMICAL REPORTS OF THE PATIENTS

Sl. No.	O.P No.	Age / Sex	Blood Sugar		Blood Urea		Serum Cholosterol		Serum Creatinine	
			BT	AT	BT	AT	BT	AT	BT	AT
21	5244	31/M	70	90	16.1	14	163	141	1.1	1.0
22	5155	50/F	126	121	15	17	149	131	1.1	1.0
23	6308	56/F	83	81	16	16	186	175	0.9	0.8
24	3245	55/F	71	86	28	26	174	167	1.0	1.0
25	4171	60/M	137	142	21	19	190	181	0.9	0.9
26	5068	40/M	85	87	20	17	144	138	1.2	1.0
27	5114	55/M	78	91	19	15	178	161	0.8	0.6
28	4624	53/F	95	87	29	25	170	172	0.9	1.0
29	1656	55/F	89	95	33	37	193	186	0.8	0.7
30	7616	52/F	76	90	29	31	157	160	0.7	0.9
31	1152	60/F	62	75	34	36	160	167	1.0	1.2
32	1713	50/F	138	110	37	28	186	172	1.1	1.0
33	9147	35/M	120	72	21	24	169	161	0.8	0.7
34	9033	58/M	62	78	31	35	155	149	0.7	1.0
35	5157	50/M	96	110	29	32	190	193	0.9	0.8
36	2413	47/F	87	96	31	31	18	178	1.0	1.1
37	5275	49/F	91	100	25	30	148	156	0.6	0.8
38	6642	55/M	78	112	20	26	167	170	1.0	0.9
39	1659	50/F	110	100	19	23	176	183	1.0	1.1
40	387	54/M	128	120	32	33	165	171	0.9	1.2

LIPID PROFILE

Sl. No.	O.P No.	Age / Sex	Before Treatment					After Treatment				
			HDL	LDL	VLDL	TGL	HDL LDL Ratio	HDL	LDL	VLDL	TGL	HDL LDL Ratio
1	3176	52/F	47.6	131	21	139	5.2	45	129	24	141	5.1
2	9994	45/F	35	130	19	213	5.1	40	125	17	190	5.0
3	1153	60/M	39	151	23	187	5.3	39	146	20	185	5.1
4	822	55/F	37	136	29	142	5.3	34	130	25	138	5.1
5	2486	45/F	41	151	30	161	5.2	37	141	27	157	5.1
6	4973	60/F	54	145	36	167	5.4	47	130	32	161	5.2
7	5059	37/F	57	141	34	164	5.3	49	131	33	160	5.2
8	4694	58/M	60	159	35	183	5.4	60	149	31	172	5.1
9	2221	58/M	58	155	32	194	5.3	61	153	33	178	5.5
10	823	49/F	52	154	29	190	5.4	47	148	28	181	5.2
11	9320	45/F	61	159	30	195	5.3	56	148	26	182	5.1
12	3189	50/M	66	160	29	196	5.7	54	152	25	180	5.3
13	842	60/F	51	158	28	207	5.2	56	147	32	186	5.3
14	9364	55/M	48	151	30	160	5.4	41	143	30	155	5.2
15	1412	48/M	50	148	29	150	5.5	37	140	28	150	5.1
16	2260	60/F	55	152	31	198	5.3	57	150	28	190	5.3
17	7915	55/F	38	130	27	140	5.1	36	126	26	138	5.0
18	8127	50/F	49	145	31	180	5.3	46	143	27	176	5.2
19	1286	60/F	56	158	30	220	5.5	52	154	28	180	5.2
20	5156	55/M	53	156	28	191	5.3	50	150	31	182	5.1

HDL – High Density Lipo protein LDL - Low density Lipo protein VLDL – Very Low Density Lipo protein

LIPID PROFILE

Sl. No.	O.P No.	Age / Sex	Before Treatment					After Treatment				
			HDL	LDL	VLDL	TGL	HDL LDL Ratio	HDL	LDL	VLDL	TGL	HDL LDL Ratio
21	5244	31/M	58	163	31	210	5.3	53	151	29	180	5.1
22	5155	50/F	60	165	29	189	5.3	56	155	27	178	5.3
23	6308	56/F	51	158	31	187	5.4	42	153	26	174	5.6
24	3245	55/F	56	163	29	199	5.5	49	159	26	180	5.1
25	4171	60/M	53	158	30	189	5.3	51	148	32	181	5.2
26	5068	40/M	66	160	29	200	5.8	57	151	27	187	5.3
27	5114	55/M	55	157	31	185	5.7	53	137	26	168	5.2
28	4624	53/F	65	154	29	182	5.7	59	145	32	178	5.4
29	1656	55/F	49	147	32	180	5.3	46	143	27	176	5.2
30	7616	52/F	50	152	29	147	5.5	39	141	26	149	5.1
31	1152	60/F	52	150	31	191	5.4	49	149	25	185	5.2
32	1713	50/F	61	160	35	188	5.2	60	156	32	172	5.1
33	9147	35/M	37	140	27	141	5.1	35	132	24	137	5.0
34	9033	58/M	57	158	32	198	5.2	54	155	28	187	5.2
35	5157	50/M	56	150	31	190	5.4	49	162	29	168	5.3
36	2413	47/F	54	159	36	195	5.4	52	159	31	174	5.7
37	5275	49/F	48	163	29	208	5.1	42	148	32	187	4.9
38	6642	55/M	53	158	36	176	5.3	43	152	28	173	5.6
39	1659	50/F	55	161	28	197	5.6	50	159	27	165	5.0
40	387	54/M	52	152	33	191	5.2	49	152	25	169	5.1

HDL – High Density Lipo protein LDL - Low density Lipo protein VLDL – Very Low Density Lipo protein

BLOOD PRESSURE LEVEL

Sl. No.	O.P No.	Age / Sex	Blood Pressure				RESULTS
			Before Treatment		After Treatment		
			SBP	DBP	SBP	DBP	
1	3176	52/F	180	100	120	80	Good
2	9994	45/F	160	100	140	90	Fair
3	1153	60/M	160	100	150	100	Poor
4	822	55/F	150	100	120	80	Good
5	2486	45/F	140	95	130	80	Good
6	4973	60/F	150	90	130	70	Good
7	5059	37/F	140	100	120	70	Good
8	4694	58/M	150	95	120	70	Good
9	2221	58/M	150	95	130	70	Good
10	823	49/F	140	90	120	70	Good
11	9320	45/F	140	95	130	80	Good
12	3189	50/M	155	100	120	80	Good
13	842	60/F	150	90	130	70	Good
14	9364	55/M	150	100	130	70	Good
15	1412	48/M	140	90	120	70	Good
16	2260	60/F	145	90	120	80	Good
17	7915	55/F	150	100	130	70	Good
18	8127	50/F	160	100	140	90	Fair
19	1286	60/F	160	90	140	80	Fair
20	5156	55/M	150	100	130	80	Good
21	5244	31/M	140	90	120	80	Good
22	5155	50/F	160	110	140	90	Fair
23	6308	56/F	150	90	130	70	Good
24	3245	55/F	145	90	120	80	Good
25	4171	60/M	150	100	140	80	Fair
26	5068	40/M	140	80	120	70	Good
27	5114	55/M	160	100	160	90	Poor
28	4624	53/F	150	100	130	70	Good
29	1656	55/F	145	90	120	80	Good
30	7616	52/F	170	100	140	90	Fair
31	1152	60/F	150	100	130	80	Good
32	1713	50/F	180	100	170	100	Poor
33	9147	35/M	145	100	120	80	Good
34	9033	58/M	150	110	120	80	Good
35	5157	50/M	150	110	120	80	Good
36	2413	47/F	140	100	130	70	Good
37	5275	49/F	150	100	120	80	Good
38	6642	55/M	150	100	130	80	Good
39	1659	50/F	140	100	120	70	Good
40	387	54/M	150	95	130	90	Fair

SBP – Systolic Blood Pressure **DBP – Diastolic Blood Pressure**

DISCUSSION

DISCUSSION

Hypertension also known as high blood pressure, is a long term medical condition, High blood pressure is classified as either primary or secondary .about 90-95% of cases are primary , defined as high blood pressure due to non specific lifestyle and genetic factors.

Uratha pitham is one among the pitha disease described by in his Yugi Munivar Vaidhiya chinthamani 800.The classical clinical features are early morning Head ache, Fatigue,Giddiness,Palpitation,Insomnia and Visual disturbances .

Symptomatically the Uratha pitham are mostly similar to that symtoms of Hypertension.

Prevalence of this disease is higher among Indians due to sedentary life style,Food habits and Hereditary. It is estimated that globally.

The patients were examined based on Siddha and as well as Modern aspects. The results obtained from their studies were discussed below for better conclusion.

The medicine puthina theeneer was administerd – 15-30ml bds for 48 days.

40 patients were treated in the outpatient Department of Pothu Maruthuvam, Government Siddha Medical College, attached to Arignar Anna Hospital, Arumbakkam, Chennai -106. The time duration for treatment was 48 days and all necessary investigations were carried out to all patients and medicine was given and followed up regularly in the OP department once in 7 days.

.1.Drug authentication

The fresh samples of Puthina leaves are authenticated by the Botanist ,dept of Botany from Govt Siddha Medical College, Chennai.

2. Physicochemical analysis

As per physiochemical analysis study on puthina theeneer contains Volatile matter-0.038%then Total solids-Nil and Specific gravity-1.000PH value(10%)-8.37.

3.IAEC (Institutional Animal Ethics Committee)

All the protocols and the experiments conducted in strict compliance according to ethical principles and guidelines provided by committee for the purpose of control

and supervision of experiments on Animals (CPCSEA). The animal experimental protocol was approved by the IAEC of Sathyabama University, Chennai.

4. ACUTE TOXICITY STUDY

Acute toxicity study of the study drug *Pudhina Theeneer* was carried out as per OECD guideline (Organization for Economic Co-operation and Development) Guideline-423.

Acute toxicity study will be carried out in accordance with OECD guideline 423 [1]. The animals were fasted overnight with free access to water. The study was conducted with single oral dose administration of *Pudhina Theeneer*.

SUB-ACUTE TOXICITY STUDY

Sub-acute toxicity study was carried out as per OECD guidelines Guideline-407 [2]. The dose utilized for evaluation of Sub-acute toxicity study is about 0.1 ml for low and 0.2 ml for high dose as derived from the acute toxicity study.

Hematological analysis

Blood samples were analyzed using established procedures and automated Bayer Hematology analyzer.

Histopathological evaluation

Histological examinations were performed on the preserved tissues with particular emphasis on those which showed gross pathological changes.

Toxicity Evaluation of Puthina theeneer by Acute toxicity- OECD 423 and Sub-Acute repeated dose oral toxicity study - OECD 407 in rats has been approved by the IAEC of Sathyabama University,Chennai. IAEC Approval No: SU/CLATR/IAEC/IV/022/2016.

Statistical analysis

The statistical analysis was carried by one way ANOVA (GRAPH PAD PRISM 5 computer program). Results were expressed as mean ± standard error .A statistical comparison was carried out using the Dunnet's test for the control and treatment group.

5.Pharmacological study

The experimental protocol was approved by The Institutional Animal Ethics Committee of Sathyabama University, Chennai, Tamil Nadu, India. Pharmacological Evaluation of Puthina theeneer in Renal artery ligation induced Hypertension in Rats.

IAEC Approval No: SU/CLATR/IAEC/053/016.

6. Bio-Chemical Analysis

The Bio-chemical analysis of Puthina theeneer contains Potassium, calcium,Reducing sugar and Alkaloids.

7. Institutional Ethics Committee (IEC)

The study was approved by Institutional Ethics Committee (IEC) and the approval number is GSMC-CH-ME-4/2015/001. It was registered in Clinical Trials Registry – India (CTRI) and the reference number is REF/2016/12/012947.

8. Clinical study

. All the patients were treated with the trial drug PUTHINA THEENEER for an average of 48 days. Blood and Urine Investigations were taken before and after treatment Blood and urine were once again tested after the completion of treatment.

AGE DISTRIBUTION

Out of 40 patients, majority of the cases that is 23(57.5%) were in 51-60 years age group, 32.5% were in 41-50 years age group 10% of cases were in 30-40 years age group.

SEX DISTRIBUTION

Out of 40 patients, majority of the cases that is 24(60%) were female and minority of the cases that is 16(40%) were male.

THINAI

Out of 40 patients, 27(67.5%) comes under Marutham and 13(32.5%) comes under Neithal.

SEASONAL DISTRIBUTION

As per Tamil seasonal classification highest incidence of 37.5% (15) of cases were noted in Koothir kaalam, 25% (10) cases were noted in pinpani kaalam, 17.5% (7) of cases were noted in Munpani kaalam, 12.5% (5) of cases were noted in Kaar kaalam, 5% (2) of cases were noted in Mudhuvenil kaalam and 2.5 (1) of cases were noted in Elavenil kaalam.

MUKKUTRAM

IN VATHAM

Pranan affected 7(17.5%), Viyanan affected in all patients (100%), Koorman affected 13% and Devathathan affected in 17 patients (42.5.%).

IN PITHAM

Pranan affected 7(17.5%), Viyanan affected in all patients (100%), Koorman affected 13% and Devathathan affected in 17 patients (42.5.%)

IN KABAM

Out of 40 Patients, Avalamagam affected in 6 (15%) patients, Santhigam affected in 9 (22.5%) patients.

EZHU UDAL THATHUKAL

Out of 40 patients, Saram and Seneer affected in all patients and enbu were affected in 5.

ENN VAGAI THERVUGAL

Vizhi were affected in 5 patients, Naadi affected in all patient.

NAADI

26 of cases had Vathapitham Naadi, 7 of cases had pitha Vatham, 5 of cases had Vatham, each 1 of cases had kaba pitham and kaba vatham.

NEIKURI

Out of 40 patients, 30 patients had Vatha Neer, 10 had Pitha Neer.

9.Bio-statistical Analysis

Since, the **p** value is highly significant ($p<0.001$) in all signs and symptoms there is significant reducing of signs and symptoms among the patients for the treatment of Uratha pitham(Hypertension). Hence, it is concluded that the treatment was effective and **significant.**

CLINICAL PROGRESS

Out of 40 patients, 17 patients were affected Insomnia, 7 patients were affected Giddiness, 3 patient affected Head ache, 4 patients affected palpitation and 9 had no symptoms

Insomnia were affected in 21 patients before treatment and after treatment it was improved in 10 Giddiness were affected 15 patients in before treatment and after treatment it was improved in 7 patients, Head ache were affected 3 patients in before treatment and after treatment, it was improve patients. Palpitation is were affected 6 patients in before treatment and after treatment it was improved 1 patient

.EFFECT ON BLOOD PRESSURE

Out of the 40 patients, Mild affected patients 10 in before treatment and after treatment 29 patients were improved and moderate affected patients 28 in before treatment and after treatment 14 were improved.

GRADING OF RESULTS

Out of 40 patients, 29 shows good result, 8 cases shows moderate results, 3 cases shows poor result.

SUMMARY

SUMMARY

- The clinical study on URATHA PITHAM was carried out in Post Graduate department of Pothu Maruthuvam, Government Siddha Medical College, attached to Arignar Anna Hospital, Chennai –106 during the period of 2014-2017.
- The clinical and pathological assessment was carried based on both Siddha and modern aspects.I had selected 40 patients were treated in the outpatient department.
- All the 40 patients were treated with puthina theeneer-15-30ml bd with water. The duration of the treatment fixed as 48 days. The clinical responses were assessing daily for all the patients.

The results obtained from the studies are summarized below:

- The incidence of the disease was found 30-60 age group. The maximum number of cases was observed in Pitha kaalam (34-66 years and 8 months).
- Among dietary and personal habits, people had mixed diet, smoker, alcoholic and tobacco users were more incidence of the disease. Middle and High socio-economic status peoples were more affected.
- Majority of cases comes under Marutham Thinai. and minority of cases comes under Neithal. Based on mukkutram, In Vatham, piranan, Koorman, devathatthan, In Pitham,sathagam, Alosagam and In Kabam, Avalambakam were affected in all patients.
- In Ezhuudalthathukal, Saaram, senneer was affected in all patients,and enbu was affected in few patients In Envagaithervugal, Vizhi were affected in all patients.
- Most of the patients had Vaadha Pitham and PithaVatha naadi.
- The clinical trial shows that there is significant improvement in the clinical manifestation of Uratha pitham.
- The pharmacological studies reveal that trial drugs had well anti hypertensive effect in rats. The toxicity study revealed that were no signs of toxicity no alteration in bio chemical parameters and histopathology study.
- The bio-statistical report of the clinical trial shows significant result.

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CONCLUSION

CONCLUSION

Uratha pitham is primarily due to the derangement of Pitham and Vatham, The taste of the trial drug Puthina theeneer has karppu and kaippu ,So the Deranged PITHAM is neutralised by the trial drug on ethirmarai basis.

- Toxicological studies revealed no toxicity in animal model, so the Puthina theeneer is safe for administration of patients with Uratha pitham(Hypertension) disease.
- In Pharmacological studies, it is evident that the trial medicine has significant Anti hypertensive activity.
- In clinical study, the trial medicine gave maximum relief from the symptoms of Uratha pitham.
- No adverse effect reported during the course of the treatment.
- The trial drug Pudhina theeneer prepation is easier more over the cost of the drug is economic one.
- As per study the Pudhina theeneer very effective for the treatment of Uratha pitham(Hypertension).

ANNEXURES

Tha Tamil Nadu Dr.M.G.R.Medical University

69,Anna Salai,Guindy,Chennai - 600 032.

This Certificate is awarded to Dr/~~Mr/Mrs~~ P. Kavitha

for participating as Resource Person / Delegate in the Seventeenth (XVII) Workshop on

" RESEARCH METHODOLOGY & BIOSTATISTICS "

FOR AYUSH POST GRADUATES & RESEARCHERS

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University from 15th to 19th June 2015.

Dr.N.KABILAN, M.D.(Siddha)
READER,DEPT.OF SIDDHA

Prof. **Dr.P.ARUMUGAM,** M.D.,
REGISTRAR i/c

Prof. **Dr.D.SHANTHARAM,** M.D., D.Diab.,
VICE - CHANCELLOR

Government Siddha Medical College
Department of Medicinal Botany

Dr.S.Sankaranarayanan M.Sc., M.Phil., Ph.D.,
Asst. Professor
Head of the Department

6, Anna Arch Rd,
NSK Nagar,
Arumbakkam, Chennai,
Tamil Nadu 600106.

AUTHENTICATION CERTIFICATE

Based upon the organoleptic/macroscopic/microscopic examination of fresh/market sample, it is certified that the specimen given by Dr. P. Kavitha BSMS studying MD (S), Government Siddha Medical College, Arumbakkam, Chennai is identified below

Binomial name	Family	Regional names
Mentha arvensis Linn.	Lamiaceae	Tamil: Pudina

Dr. S. Sankaranarayanan M.Sc., M.Phil., Ph.D.,

Dr. S. SANKARANARAYANAN, M.Sc., M.Phil., Ph.D.,
Assistant Professor
Dept. of Maruthuva Thavaraiyal
(Medicinal Botany and Pharmacognosy)
Govt. Siddha Medical College,
Arumbakkam, Chennai-600 106.

GSMC/MB-07/2016
Date:03.06.2016

CERTIFICATE

This is to certify that the project entitled "**TOXICITY EVALUATION OF *PUDHINA THEENER* BY ACUTE TOXICITY -OECD 423 AND SUB-ACUTE REPEATED DOSE ORAL TOXICITY STUDY- OECD 407 IN RATS**" has been approved by the IAEC of Sathyabama University, Chennai.

IAEC Approval No.: **SU/CLATR/IAEC/IV/022/2016**
Animal Sanctioned: *Rattus norvegicus* / Wistar albino rats
Male: 6; Female: 12; Total: 18 (Eighteen)
Date: 5.3.2016

DR.B.SHEELA RANI
Chair Person

DR.R.ILAVARASAN
CPCSEA Main Nominee

CENTRE FOR LABORATORY ANIMAL TECHNOLOGY AND RESEARCH (CLATR) ★ SATHYABAMA UNIVERSITY Chennai - 600 119

Name Dr. P. Kavitha

IAEC SU/CLATR/IAEC/IV/022/2016

Name of the Formulation Pudhina Theeneer

Abbreviation PT

Project Report on Toxicity Profiling of Pudhina Theeneer

ACUTE TOXICITY STUDY

Acute toxicity study of the study drug *Pudhina Theeneer* was carried out as per OECD guideline (Organization for Economic Co-operation and Development) Guideline-423.

Animal

Healthy adult Wistar albino rat weighing between 170-200 g were used for the study. The animals were housed in poly propylene cages and were kept in well ventilated with 100% fresh air by air handling unit (AHU). A 12 light / dark cycle were maintained .Room temperature was maintained between 22 $\pm$ 2^0 Cand relative humidity 50–65%. They were provided with food (Sai feeds, Bangalore, India) and water *ad libitum*. All the animals were acclimatized to the laboratory for 7 days prior to the start of the study.

The experimental protocol was approved by The Institutional Animal Ethics Committee of Sathyabama University, Chennai, Tamil Nadu, India.

Acute toxicity Study

Acute toxicity study will be carried out in accordance with OECD guideline 423 [1]. The animals were fasted overnight with free access to water. The study was conducted with single oral dose administration of *Pudhina Theeneer*.

Animal Grouping

One group consist of 6 female rats were used for this study. The dose utilized for evaluation of acute toxicity study is about 1.25 ml per rat which was ten times higher than the normal human therapeutic dose (30ml per day)

Animal Grouping

GROUP I : Animals received Test drug 1.25 ml (p.o)

The animals were fasted overnight (12- 16 hrs) with free access to water. The study was conducted with single oral administration of study drug*Pudhina Theeneer* 1.25 ml (p.o). The animals were observed continuously for first 72 h and then 14 days for emerging signs of behavioral changes, body weight changes and for mortality.

Occurrence of toxicity in animals were observed continuously for the first 4 to 24 h and observed periodically for the next 14 days. Observation includes the change in skin, fur, eyes and mucus membrane. Appearance of C.N.S,C.V.S and A.N.S related toxicity such as tremors, convulsions, sedation, steric behavior, respiratory distress, cardiovascular collapse, response to sensory stimuli, salivation, diarrhea, lethargy, sleep, coma and mortality were observed with special attention.

Body weight was recorded periodically. At the end of the experiment all animals were subjected for gross necropsy and observed for pathological changes.

SUB-ACUTE TOXICITY STUDY

Sub-acute toxicity study was carried out as per OECD guidelines Guideline-407 [2]. The dose utilized for evaluation of Sub-acute toxicity study is about 0.1 ml for low and 0.2 ml for high dose as derived from the acute toxicity study.

Animals

Healthy adult Wistar albino rat weighing between 170-200 g were used for the study. The animals were housed in poly propylene cages and were kept in well ventilated with 100% fresh air by air handling unit (AHU). A 12 light / dark cycle were maintained .Room temperature was maintained between 22 $\pm$ 2^{o} Cand relative humidity 50–65%. They were provided with food (Sai feeds, Bangalore, India) and

water *ad libitum*. All the animals were acclimatized to the laboratory for 7 days prior to the start of the study.

The experimental protocol was approved by The Institutional Animal Ethics Committee of Sathyabama University, Chennai, Tamil Nadu, India.

IAEC SU/CLATR/IAEC/IV/022/2016

Animal Grouping

Animals were divided into three groups of 06 animals each consist of 3 male and 3 female rats.

GROUP I **:** Animals received saline 5 ml/kg b.w (p.o)

GROUP II **:**Animals received low dose of test drug 0.1 ml (p.o)

GROUP III **:**Animals received high dose of test drug 0.2 ml (p.o)

The animals were randomly divided into control group and drug treated groups for two different doses viz. low dose (0.1 ml) and high dose (0.2 ml) per rat.

The animals were administrated with the study drug once daily for 28 days. The animals in group I (control group) received normal saline 5 ml/kg b.w. The animals in group II received low dose of *Pudhina Theeneer* 0.1 ml(p.o) and group III received high dose of *Pudhina Theeneer* 0.2 ml (p.o).

The rats were weighed periodically and observed for signs of toxicity pertain to C.N.S, C.V.S, A.N.S including behavioral changes, food - water intake and morphological changes. At the end of 28^{th} day, the animals were fasted for overnight with free access to water. On 29^{th} day the animals were sacrificed with excess anesthesia. Blood samples were collected from aorta and stored in EDTA (ethylenediamine –tetra actate) for Hematological analysis and for serum generation for biochemical analysis.

The vital organs including heart, brain, lungs, spleen, kidneys, liver, stomach, testes, and ovary were harvested and carefully examined for gross lesions. The organs were preserved in 10% formalin for histopathological assessment and interpretation.

Hematological analysis

Blood samples were analyzed using established procedures and automated Bayer Hematology analyzer. Parameters evaluated include Packed Cell Volume (PCV), Red Blood Cells (RBC) count, White blood cell count (WBC), Platelet Count, Hemoglobin (Hb), Mean cell Haemoglobin Concentration (MCHC), Mean Red Cell Volume (MCV), Mean Cell Hemoglobin (MCH), Mean platelet volume (MPV), Neutrophils, Eosinophil's, Basophils, Lymphocytes and Monocytes.

Biochemical analysis[3]

Serum samples were analyzed for High Density Lipoprotein (HDL), Low density Lipoprotein (LDL) , Very low density Lipoprotein (VLDL) , Triglycerides (TGL), Total Cholesterol , Blood urea nitrogen (BUN), Creatinine, Albumin, Total Protein, Glucose, Uric acid, Aspartate Transaminase (AST), Alanine amino Transaminase (ALT) and Alkaline Phosphatase (ALP) using Mind ray auto analyzer model BS 120.

Histopathological evaluation[4]

Organs included of heart, brain, lungs, spleen, kidneys, liver, stomach, testes and ovary. Histological slides of organs were made and observed under the microscope. The pathological observations of cross section of these organs were performed on gross and microscopic bases. Histological examinations were performed on the preserved tissues with particular emphasis on those which showed gross pathological changes.

Statistical analysis

The statistical analysis was carried by one way ANOVA (GRAPH PAD PRISM 5 computer program). Results were expressed as mean ± standard error .A statistical comparison was carried out using the Dunnet's test for the control and treatment group.

Methodology

Rats of control and treatment group were allowed to explore to open field on clean and sterile cage with blotting paper. The collected pellets were analyzed for consistency, color, Shape, Presence of blood cells etc.

Acute Toxicity Study

Analysis	**Group I**
Consistency	Soft
Shape	Round ended
Colour	Greenish
Mucous Shedding	Absence
Blood Cells	Absent
Signs of Infection	None Observed

Sub-Acute Toxicity Study			
Analysis	**Group I**	**Group II**	**Group III**
Consistency	Soft	Soft	Soft
Shape	Oblong	Round ended	Round ended
Colour	Brownish green	Greenish	Greenish
Mucous Shedding	Absence	Absence	Absence
Blood Cells	Absent	Absent	Absent
Signs of Infection	None Observed	None Observed	None Observed

Muscle Grip Strength Analysis

Methodology

The grip strength test is a simple non-invasive method designed to evaluate rat muscle force in vivo. Rats of control and drug treatedgroup was allowed to hold the pull bar with both the hind limbs firmly then the animal was gently pulled back with the tail until the animal lost the grip toward the bar. The procedure was repeated to

get the average value. Muscle grip ness of the drug treated group was compared to that of the control rat to ensure the change in coordination.

Metabolic Cage for Urine Collection

Rat of control and treatment group was placed individually in metabolic cage with free access to feed and water. Urine dropping from the animal was collected using specialized wire mesh system fixed at the base of the cage having provision to trap the fecal pellet mixed with urine sample. The collected urine sample was subjected to analysis with respect to colour, pH, glucose, ketone bodies, pus and blood cells.

RESULTS

Assessment of clinical signs in rats treated with *Pudhina Theeneer* on Acute toxicity study

Parameter	**Group I**
Clinical Signs Parameters for the duration of 14 days	Test Drug 1.25 ml / rat
Number of animals observed	6 Female
Lacrimation	Absence
Salivation	Absence
Animal appearance	Normal
Tonic Movement	Absence
Clonic Movement	Absence
Laxative action	Absence
Touch Response	Normal
Response to Sound	Normal Response
Response to Light	Normal Response
Mobility	Normal Response
Respiratory Distress	Nil
Skin Color	Normal
Stereotype behavior	Absence
Piloerection	Absence
Limb Paralysis	Absence
Posture	Normal
Open field behavior	Normal
Gait Balancing	Normal
Freezing Behaviour	Absent

Sings of Stress and Anxiety	None Observed
Muscular coordination	Normal
Muscle grip	Normal
Sedation	Absence
Social Behavior	Normal
Urine Analysis	No Abnormality
Urine Colour	Pale yellowish
Urine Ph	6
Urine –Glucose	Absence
Urine –Ketones	Absence
Urine- Bilirubin	Absence
Urine-Blood Cells	Negative
Urine - Pus cells	Negative
Mortality	Nil

Quantitative data on the body weight of rats treated with *Pudhina Theeneer* in Acute toxicity study

Group I	**Before Treatment Weight in Gms**	**After Treatment Weight in Gms**
Mean	177.5	181.2
Std. Deviation	5.32	4.956
Std. Error	2.172	2.023

Values are mean ± S.D (n = 6 per group). Control and treatment group were compared statistically using one way ANOVA followed by Dunnett's test.

Assessment of clinical signs in rats treated with *Pudhina Theeneer* on Sub- Acute toxicity study

Clinical Signs Parameters for the duration of 28 days	Control	Test Drug 0.1 ml	Test Drug 0.2 ml
Number of animals observed	3 Male and 3 Female	3 Male and 3 Female	3 Male and 3 Female
Lacrimation	Absence	Absence	Absence
Salivation	Absence	Absence	Absence
Animal appearance	Normal	Normal	Normal
Tonic Movement	Absence	Absence	Absence
Clonic Movement	Absence	Absence	Absence

Laxative action	Absence	Absence	Absence
Touch Response	Normal	Normal	Normal
Response to Sound	Normal Response	Normal Response	Normal Response
Response to Light	Normal Response	Normal Response	Normal Response

Effect of *Pudhina Theeneer* on Body weight of Rats in Sub-acute toxicity study

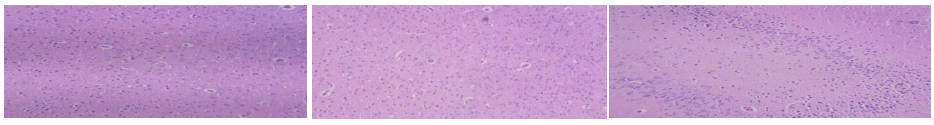
Values are mean ± S.D (n = 6 per group of which 3 males and 3 females). Control and treatment groups were compared statistically using one way ANOVA followed by Dunnett's test.

Quantitative data on the food and water intake of rats treated with *Pudhina Theeneer* for 28 days in Sub-acute toxicity study

GROUP I	**Food intake**	**Water intake**
Mean	17.33	33.92
Std. Deviation	3.82	2.727
Std. Error	1.91	1.363
GROUP II	**Food intake**	**Water intake**
Mean	19.83	31.25
Std. Deviation	3.737	2.47
Std. Error	1.868	1.235

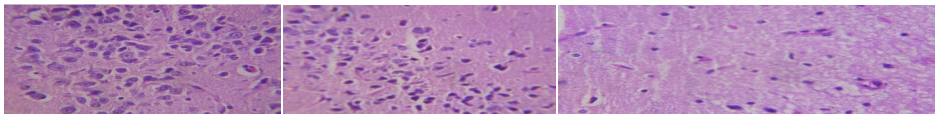
Histopathology of Brain (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

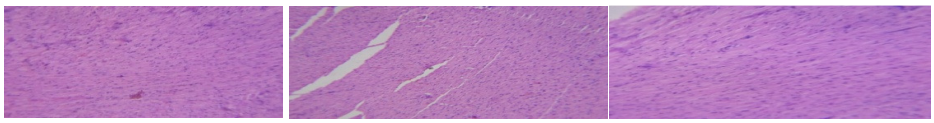
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

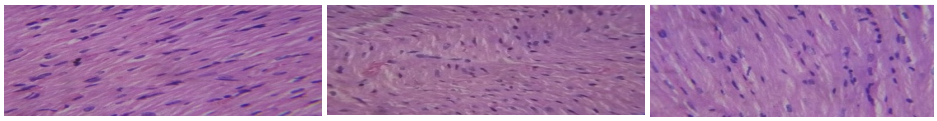
Histopathology of Heart (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

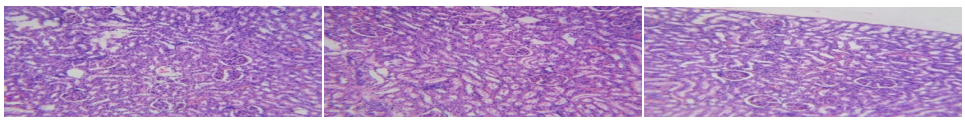
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

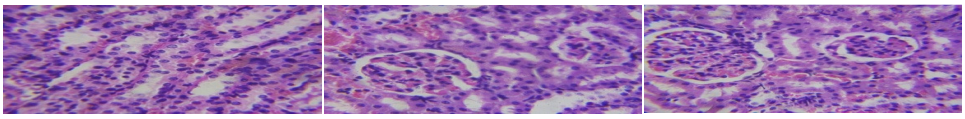
Histopathology of Kidney (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

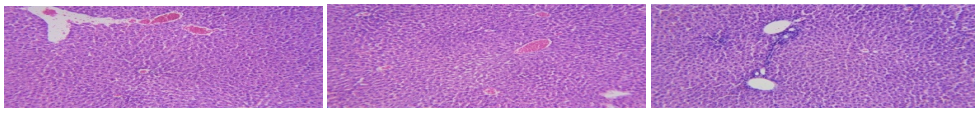
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

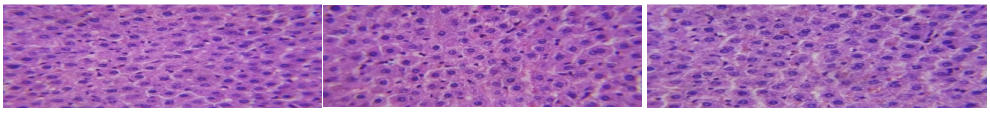
Histopathology of Liver (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

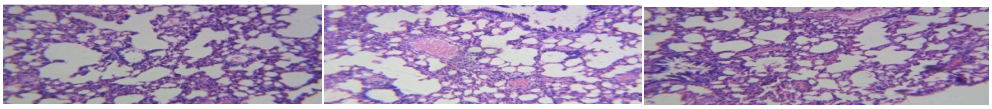
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

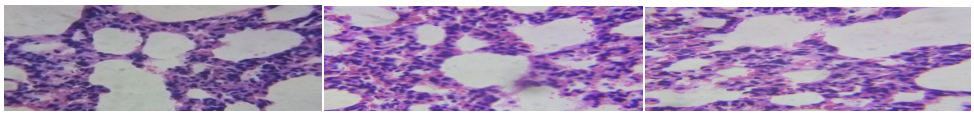
Histopathology of Lung (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

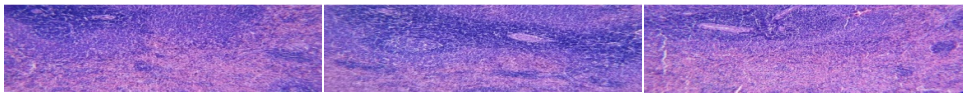
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

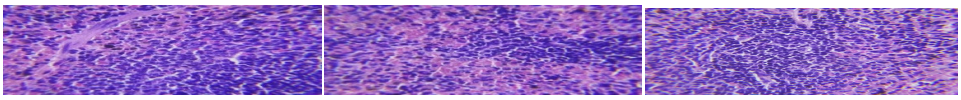
Histopathology of Spleen (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

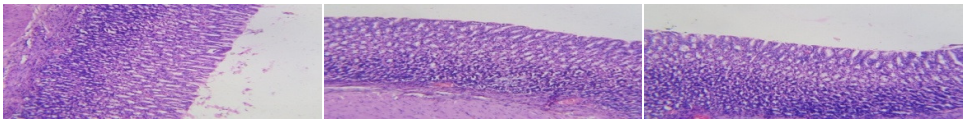
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

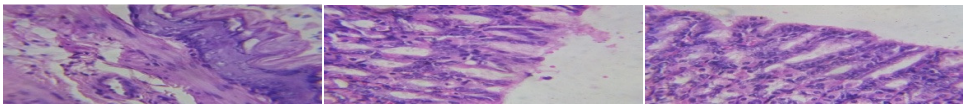
Histopathology of Stomach (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

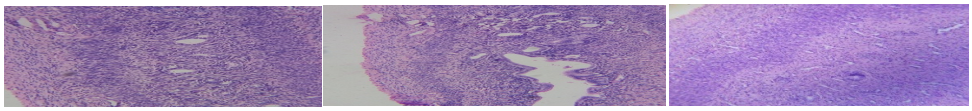
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

Histopathology of Uterus (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



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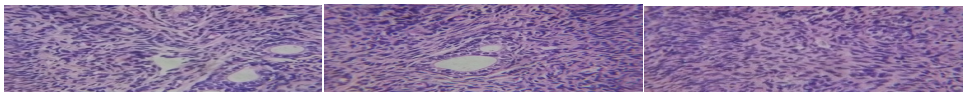
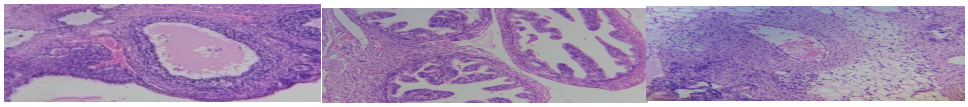


GROUP I **GROUP II** **GROUP III**

Histopathology of Ovary (Female Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



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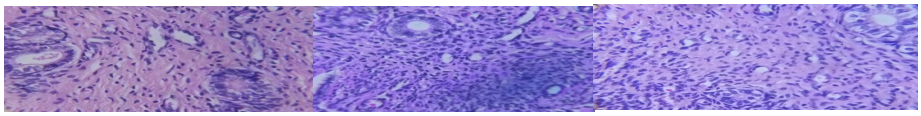
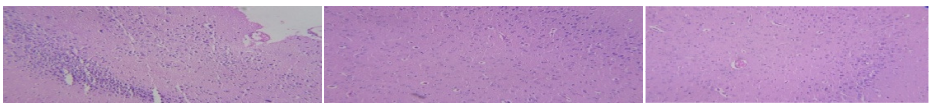


GROUP I **GROUP II** **GROUP III**

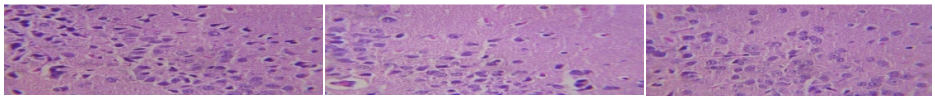
Histopathology of Brain (Male Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

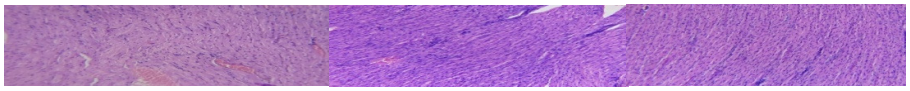
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

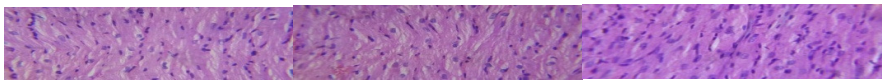
Histopathology of Heart (Male Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

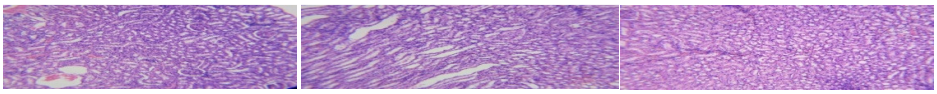
High Power Magnification 40X



GROUP I **GROUP II** **GROUP III**

Histopathology of Kidney (Male Rat) in Sub-acute toxicity Study

Low Power Magnification 10X



GROUP I **GROUP II** **GROUP III**

Reference

1. OECD Guideline for testing of Chemicals (2001) Guideline 423: Acute Oral Toxicity-Acute Toxic Class Method.
2. OECD Guide lines 407 for testing of chemicals. Repeated dose 28-Day Oral Toxicity Study in Rodents. 2008: pp 2- 8.
3. Jain N, Sharma P, Sharma N, Joshi S C. Haemato-biochemical profile following sub acute toxicity of malathion in male albino rats. Pharmacologyonline. 2009;2:500–506.
4. Suvarna, S.K., C.Layton and J.D. Bancroft. 2013. Bancroft's theory and practice of histological techniques. 7th edn, Churchill Livingstone, London

CERTIFICATE

This is to certify that the project entitled "**PHARMACOLOGICAL EVALUATION OF PUDHINA THEENEER IN RENAL ARTERY LIGATION INDUCED HYPERTENSION IN RATS**." has been approved by the Institutional Animal Ethics Committee of Sathyabama University, Chennai.

IAEC Approval No.: **SU/CLATR/IAEC/VII/053/2016**
Principal Investigator: Dr. P. Kavitha
Animal Sanctioned: *Rattus norvegicus* / Wistar albino rats
Male: 24; Total: 24 (Twenty Four)
Date: 05.10.2016

DR. B. SHEELA RANI
Chairperson

DR. R. ILAVARASAN
CPCSEA Nominee

CENTRE FOR LABORATORY ANIMAL TECHNOLOGY AND RESEARCH (CLATR) * SATHYABAMA UNIVERSITY Chennai - 600 119

Pharmacological Evaluation of *PudhinaTheeneer* in Renal artery ligation induced hypertension in rats.

Name: Dr.P.Kavitha

IAEC: SU/CLATR/IEAC/VII/053/2016

Animals

Healthy adult Wistar albino male rats weighing between 200-220 g were used for the study. The animals were housed in poly propylene cages and were kept in well ventilated with 100% fresh air by air handling unit . A 12 light / dark cycle were maintained .Room temperature was maintained between 22 $\pm$ 2^{o} Cand relative humidity 50–65%. They were provided with food (Sai feeds, Bangalore, India) and water *ad libitum*. All the animals were acclimatized to the laboratory for 7 days prior to the start of the study.The experimental protocol was approved by The Institutional Animal Ethics Committee of Sathyabama University, Chennai, Tamil Nadu, India.

IAEC**:** SU/CLATR/IEAC/VII/053/2016

Experimental Methodology

The animals were grouped into four groups of 6 animals each. Group I (Sham Operated group) –Surgically exposed renal artery without ligation. Group II – Rats underwent surgical renal artery ligation served as hypertension control. Group III – Rats underwent surgical renal artery ligation and treated with low dose of *PudhinaThaneer*0.1 ml(p.o). Group IV – Rats underwent surgical renal artery ligation and treated with low dose of *PudhinaThaneer*02 ml(p.o).

Study Protocol

All the experimental animal belongs to group III and IV were treated with 0.1 and 0.2 ml of *PudhinaThaneer*orally for the period of four weeks followed by this on the 29th day of experiment the renal artery was occluded for 6 h (ischemia) following the surgery; the animals than anesthetized by intraperitoneal injection of 30–40 mg/kg pentobarbital sodium. To measure hemodynamic parameters, the cannula in the carotid artery was connected to a pressure transducer (ML224-Quad Bridge Amplifier, ADInstrument) and Powerlab data acquisition system (8/30 LabChart, ADInstrument). For administration of the test compound, a jugular vein was cannulated. After 6 h the renal arterial artery ligation was removed (reperfusion). This

leads to a rise in blood pressure as a consequence of elevated plasma renin level. Within 15 min a stable hypertension is achieved. The test substance was then administered by intravenous injection at doses of 0.1 and 0.2 ml to renal hypertensive and normotensive rats. Hemodynamic parameters were monitored continuously. After measurement of blood pressure, the left kidney was removed and stores at 10% formalin saline for histopathological analysis.

Induction of hypertension

The hypertension was induced in experimental animals by ligation of left renal artery. Rats were anaesthetised by 30–40 mg/kg pentobarbital sodium. A 3 cm retroperitoneal flank incision was done. The left kidney was exposed and the renal artery were carefully separated free of the renal vein. The renal artery was then ligated by sterile surgical silk thread.

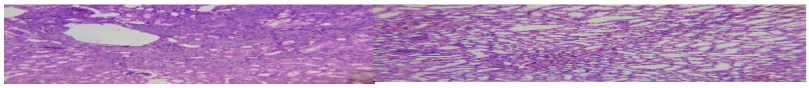
Measurement of Blood pressure

Systolic blood pressures will be measured in the middle two days of every week for four using the tail-cuff method. The average of five readings was then recorded. Duration of the study was 4 weeks.

Histopathology of Rat Kidney (H&E) Staining

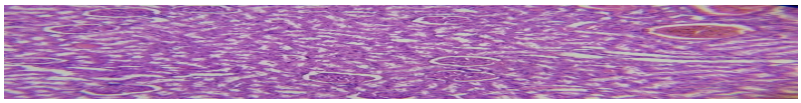
Low Power Magnification 10 X

Control Group Treatment group – High dose of *PudhinaTheeneer*



Histopathology of Rat Kidney (H&E) Staining

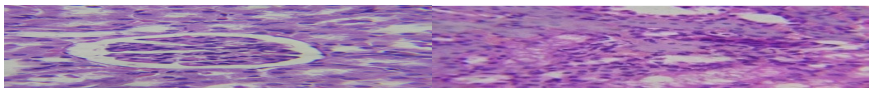
HighPower Magnification 40 X Control Group



Histopathology of Rat Kidney (H&E) Staining

HighPower Magnification 40 X

Control Group **Renal artery Ligation group**



Treatment group – Low dose of *PudhinaTheeneer*

Treatment group – High dose of *PudhinaTheeneer*

Pathology report

- Sample belongs to sham operated control group rat reveals the presence of normal glomerulus (G) surrounded by a narrow capsular space and the parietal layer of Bowman's capsule. Epithelial lining on proximal convoluted tubule appears normal. Lumen of distal convolutes tubule and collecting duct was normal. No signs of infiltration or degeneration were observed in this group
- Microscopic observation of kidney belongs to renal artery ligated group reveals the presence of mild glomerular necrosis, protein cast, degeneration of tubular epithelium, necrosis in tubular epithelium and congestion of blood vessels.
- Sample belongs to group III rats projects occasional evidence of protein cast and restored tubular epithelium preservation with marked evidence of inflammatory changes.
- Increased bowman’s space with regular arrangement of tubular epithelium and very minimal cast were observed with dominant evidence of blood vessel congestion

Reference

1. Vogel GH, Vogel WH. Drug Discovery and Evaluation:PharmacologicalAssays.In:Vogel GH, Vogel WH. Editors. Cardiovascular activity. 2nded. USA: Springer press, 1997. p. 172.

Sakat SS, Wankhede SS, Juvekar AR, Mali VR, Bodhankar SL. Antihypertensive effect of aqueous extract of ElaeocarpusganitrusRoxb. seeds in renal artery occluded hypertensive rats. Int. J. Pharm Tech Res, 2009; 1(3): 779-82.

2. Jabeen Q, Bashir S, Lyoussi B, Gilani AH. Coriander fruit exhibits gut modulatory, blood pressure lowering and diuretic activities. J. Ethnopharmacol. 2009;122:123–130.

3. Rathod SP, Shah N, Balaraman R. Antihypertensive effect of dietary calcium and deltiazem, a calcium channel blocker on experimentally induced hypertensive rats. Indian J. Pharmacol. 1997;29:99–104.

சித்த மருத்துவ மைய ஆராய்ச்சி நிலையம், சென்னை - 600 106
सिद्ध केंद्रीय अनुसन्धान संस्थान,
अण्णा सरकारी अस्पताल परिसर, अरुम्बाक्कम, चेन्नई – 600 106
SIDDHA CENTRAL RESEARCH INSTITUTE
(Central Council for Research in Siddha, Ministry of AYUSH, Govt. of India)
Anna Govt. Hospital Campus, Arumbakkam, Chennai – 600106
Phone: 044-2621 4925, Fax: 044-2621 4809

17.02.17

CERTIFICATE

Name of the student: Dr. P. Kavitha, III year PG student, Maruthuvam, Government Siddha Medical College, Arumbakkam, Chennai-600 106.

Name of the sample: Puthina Theeneer

Name of the Experiment	Mean
Volatile matter	0.038 %
Total solids	Nil
Specific gravity	1.0009
pH value (10%)	8.37

(R. Shakila)
Research Officer (Chemistry) & Head,
Department of Chemistry

(Dr. P. Sathiyarajeswaran)
Assistant Director (Siddha) I/c

डॉ. पी. सत्तियराजेस्वरण/Dr. P. Sathiyarajeswaran
प्रभारी सहायक निदेशक (एस-II)/Assistant Director (S-II) I/C
सिद्ध केंद्रीय अनुसंधान संस्थान,
(केन्द्रीय सिद्ध अनुसंधान परिषद, आयुष मंत्रालय, भारत सरकार)
अण्णा सरकारी अस्पताल परिसर, अरुम्बाक्कम, चेन्नई-600 106
SIDDHA CENTRAL RESEARCH INSTITUTE
(Central Council for Research in Siddha, Ministry of AYUSH, Govt. of India)
Anna Govt. Hospital Campus, Arumbakkam, Chennai 600106

BIO-CHEMICAL ANALYSIS OF TRIAL MEDICINE

Preparation of Sodium Carbonate extract:

2 gm of the sample drug is mixed 5 gm of Sodium carbonate and takenin a 100 ml beaker and 20 ml of distilled water is added. The solution is boiled for 10 minutes, cooled and then filtered. The filtrate is called sodium carbonate extract.

S.No	EXPERIMENT	OBSERVATION	INFERENCE
I	**TEST FOR ACID RADICALS**		
1a	**Test for Sulphate** 2 ml of the above prepared extractis taken in a test tube. To this add2ml of 4% Ammonium oxalatesolution.	Absence of White Precipitate	Absent
b	2ml of extract is added with 2ml of dilute hydrochloric acid until the effervescence ceases off. Then2ml barium chloride solution isadded.	Absence of White Precipitate	Absent
2	**Test for Chloride:** 2ml of extract is added with dilutenitric acid till the effervescenceceases. Then 2ml of silver nitratesolution is added.	white precipitate obtained	Absent
3	**Test for Phosphate** 2ml of the extract is treatedwith 2 ml of Ammoniummolybdate solution and 2ml ofconcentrated nitric acid.	Yellow precipitate Obtained	Absent
4	**Test for Carbonate:** 2ml of the extract is treatedwith 2ml of magnesiumsulphate solution.	Absence of white Precipitate	Absent
5	**Test for Sulphide:** 1 gm of the substance is treated with 2ml of concentrated Hcl.	Absence of Rotten egg smelling	Absent
6	**Test for Nitrate:** 1gm of the substance is heatedwith copper turnings andconcentrated sulphuric acidand viewed the test tubevertically down.	Absence of reddish brown gas.	Absent
7a	**Test for Fluoride and oxalate** 2ml of the extract is added with2ml of dilute acetic acid and2ml of calcium chloridesolution and heated.	Absence of white Precipitate	Absent
B	5 drops of clear solution isadded with 2ml of diluted sulphuric	KMNO4 solution	Absent

	acid and slightlywarmed to this, 1 ml of dilutepotassium permanganatesolution is added.	Discolourisation obtained	
8	**Test for Nitrite** 3 drops of the extract is placedon a filter paper. On that, 2 drops of Acetic Acid and 2drops of Benzidine solution isplaced.	Absence of yellowish red colour	Absent
9	**Test for Borate** 2 pinches of the substance ismade into paste by usingSulphuric acid and Alcohol(95%) and introduced into theblue flame.	Absence of Green tinged flame	Absent
II	**TEST FOR BASIC RADICALS**		
10	**Test for lead** 2 ml of the extract is addedwith 2 ml of Potassium iodidesolution.	Absence of Yellow Precipitate	Absent
11a	**Test for Copper** One pinch of substance ismade into paste withconcentrated Hydrochloric acidin a watch glass and introducedinto the non luminous part ofthe flame.	Absence of Bluish green coloured flame.	Absent
B	2ml of the extract is added withexcess of Ammonia solution	Absence of deep Blue	Absent
12	**Test for Aluminium** To the 2 ml of extract. SodiumHydroxide solution is added indrops to excess	Absence of White Precipitate.	Absent
13a	**Test for Iron** To the 2 ml of extract, 2 ml ofAmmonium ThiocyanateSolution is added.	Absence of Blood red colour	Absent
b	To the 2 ml of extract, 2 ml ofAmmonium Thiocyanatesolution and 2 ml ofconcentrated Nitric Acid isadded.	Absence of Blood red colour obtained	Absent
14	**Test for Zinc** To the 2 ml of extract SodiumHydroxide solution is added indrops to excess.	Absence of White precipitate.	Absent
15	**Test for Calcium** 2 ml of the extract is addedwith 2 ml of 4% AmmoniumOxalate solution.	Absence of White precipitate.	Absent
16	**Test for Magnesium** 2mlof extract, SodiumHydroxide solution is added indrops to excess.	Absence of White precipitate.	Absent
17	**Test for Ammonium** 2ml of extract few ml	Absence of Reddish brown	Absent

	ofNessler's Reagent and excessof Sodium Hydroxide solutionare added.	precipitate	
18	**Test for Potassium** A pinch of substance is treatedwith 2 ml of Sodium Nitritesolution and then treated with 2ml of Cobal Nitrate in 30%glacial Acetic acid.	Presence of Yellow precipitate	Present
19	**Test for Sodium** 2 pinches of the substance ismade into paste by usingHydrochloric acid andintroduced into the blue flame.	Absence of Yellow colour flame	Absent
20	**Test for Mercury** 2 ml of the extract is treatedwith 2 ml of SodiumHydroxide solution.	Absence of yellow precipitate	Absent
21	**Test for Arsenic** 2 ml of extract is treated with 2ml of silver Nitrate solution.	Absence of Yellow precipitate	Absent
22	**Test for Starch** 2ml of extract is treated withweak iodine solution	Absence of Blue colour	Absent
23	**Test of reducing Sugar** 5ml of Benedicts qualitativesolution is taken in a test tubeand allowed to boil for 2minutes and added 10 drops ofthe extract and again boiled for2 minutes. The colour changesare noted.	Absence of Green colour	Present
24	**Test of the alkaloids** 2ml of the extract is treatedwith 2ml of potassium lodidesolution.	Presence of Red colour	Alkaloids present
25	**Test of the proteins** 2ml of the extract is treated with 2ml of 5% NaOH,mixwell and add 2 drops of coppersulphate solution.	Absence of Violet colour	Absent

RESULTS:

The given sample(Puthina theeneer) contains

Potassium

Alkaloids

Reducing sugar.

GOVERNMENT SIDDHA MEDICAL COLLEGE
Arumbakkam, Chennai-106

Communication Of The Decision Of Institutional Ethics Committee (IEC)

IEC No: GSMC-CH-ME-4/2015/001

Protocol title:
A CLINICALSTUDY ON URATHTHA PITHTHAM (PRIMARY HYPERTENSION) WITH THE EVALUATION OF SIDDHA DRUG PUTHINA THEENEER

Principal Investigator: DR.P. KAVITHA.

Name & Address of Institution :

Government siddha medical college,

Arumbakkam, Chennai-106

☑ New Review ☐ Revised Review ☐ Expedited Review

Date of review (DD/MM/YY): 26-03-2015

Date Of Previous Review, If Revised Application :

Decision of the IEC

☑ Recommended ☐ Recommended with suggestions

☐ Revision ☐ Rejected

Suggestions / Reasons / Remarks :
1. change the word Hypertension into primary Hypertension
2. Bp levels should be within 140/90mmHg to 180/100 mmHg

Recommended for a period of 1 year
from date of completion of preclinical studies:

Please Note:

- Inform IEC immediately in case of any adverse events/serious drug reaction.
- Seek IEC approval in case of any change in the study procedure, site and investigator
- This approval is valid only for period mentioned above
- IEC member have the right to review the trial with prior intimation.

26/3/15.

Dr.P.Jeyaprakashnarayanan
Chairman

Dr.V. Banumathy
Member Secretary

INSTITUTIONAL ETHICS COMMITTEE

Date:

Sub: IEC review of research proposals.

Ref: Your letter dated

MEMBERS	PARTICIPATION	SIGNATURE
DR.P.JEYAPRAKASH NARAYANAN M.D(S)., Chairman		
DR.V.BANUMATHI M.D(S)., Member Secretary		
DR.N.KABILAN M.D(S)., Clinician- Siddha	✓	26/3/15
DR.P.SATHIYA RAJESWARAN M.D(S)., Clinician- Siddha	✓	26/3/15
DR.G.AADINAAATH REDDY,M.Pharm, Ph.D., Pharmacologist	✓	Aadinaath 26/03/15
DR.S.THILAGAVATHY Msc.,Ph.D., Social Scientist	✓	26/3/15
DR.T.MAHALAKSHMI M.A.,Ph.D., Linguistic Expert	✓	T.Mahal 26.03.15
DR.P.VIDYA M.B.B.S., DMRD., Modern Medicine Expert	✓	26/3/15
MR.P.SARAVANAN., Public Person	✓	

26/3/15.

Dr.P.Jeyaprakashnarayanan
Chairman

Dr.V.Banumathi
Member Secretary

CLINICAL PROGNOSIS

Treatment for Hypertension:

The most popular non parametric statistical tool, namely, McNemar Test analysis has been employed to analyses the effectiveness with the help of a hypothesis.

S. No	Symptoms	Before Treatment	After Treatment
		n%	n%
1.	Insomnia	21(52.5)	10(25)**
2.	Giddiness	15(37.5)	7(17.5)**
3.	Head ache	3(7.5)	0(0)*
4.	Palpitation	6(15)	1(2.5)**

McNemat test, C.I: 95%, *P<0.05; **P<0.01

Software: spss17 version

Number of cases: 40

Inference:

Since the p value is significant in all symptoms. So there is significant reducing of symptoms among the patients for the treatment of **Hypertension**. Hence it is concluded that the treatment was effective and **significant.**

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

CLINICAL STUDY ON **"PUTHINA THEENEER"** IN THE TREATMENT OF

"URATHA PITHAM"(HYPERTENSION)

INFORMED CONSENT FORM

"I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to participate in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care".

"I have received a copy of the information sheet/consent form".

Date:

Station:

Signature of the Guide: Signature of the Investigator:

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உரத்த பித்தம் §¿¡öì¸¡É º'ò¾ÁÕó¾ý (புதினா தீநீர்)

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¬öÅ¡ÇÃ¡ø °¡ýÈÇ'ì¸ôÀð¼Ð

¿¡ý þó¾ ¬ö× ÌÈ'ò¾ «¨ÉòÐ Å'ÀÃí¸¨ÇÔõ §¿¡Â¡Ç'ì Ì ÒÃ'Ôõ Å¨¸Â'ø±ÎòÐ¨Ãò§¾ý±É¯Ú¾ÂÇ'ì¸'§Èý.

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±ýÉ'¼õ þó¾ ÁÕòÐÅ ¬öÅ'ý ¸¡Ã½ò¨¾Ôõ, ÁÕó¾ý ¾ý¨Á ÁüÚõ ÁÕòÐÅ ÅÆ'Ó¨È ÀüÈ'Ôõ, ¦¾¡¼÷óÐ ±ÉÐ ¯¼ø þÂì¸ò¨¾¸ñ¸¡½'ì¸×õ, «¾¨ÉÀ¡Ð¸¡ì¸×õ ÀÂýÀÎõ ÁÕòÐÅ ¬ö×ì Ü¼ ÀÃ'§°¡¾¨É¸û ÀüÈ'¾Õô¾ «Ç'ì Ìõ Å¨¸Â'ø ¬ö× ÁÕòÐÅÃ¡ø Å'Çì¸ì ÜÈôÀð¼Ð.

¿¡ý þó¾ ÁÕòÐÅ ¬öÅ'ý §À¡Ð, ¸¡Ã½õ ±Ð×õ ÜÈ¡Áø, ±ô¦À¡ØÐ §Å ñ ÎÁ¡É¡Öõ þó¾ ¬öÅ'Ä'ÕóÐ ±ý¨É Å'ÎÅòÐ ¦¸¡ûÙõ ¯Ã'¨Á¨Â ¦¾Ã'ó¾Õì¸'ý§Èý. ¿¡ý ±ýÛ¨¼Â Í¾ó¾ÃÁ¡¸ §¾÷× ¦°öÔõ ¯Ã'¨Á¨Âì ¦¸¡ñ Î உரத்த பித்தம் §¿¡öì¸¡É புதினா தீநீர் ÁÕó¾ý À㸡Ã'ôòò ¾È¨Éì¸ñ½È'ÔõÁÕòÐÅ¬öÅ'üÌ±ý¨É¯ðÀÎò¼´ô0¾ø «Çì¸'§Èý.

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GOVT.SIDDHA M

EDICAL COLLEGE,

CHENNAI-106

POST GRADUATE DEPARTMENT

BRANCH –I MARUTHUVAM

CASE SHEET PROFORMA FOR URATHA PITHAM

Duration: 2014-2017

OP No / IP No.	:	Occupation	:
Ward No	:	Income	:
Bed No	:	Nationality	:
Name	:	Religion	:
Age	:	D.O.A	:
Sex	:	D.O.D	:
		Diagnosis	:
Address	:		

1. Complaints and duration :

2. History of present illness :

3. History of past illness :

4. Personal history :

5. Occupational history :

6. Menstrual history :

7. Personal Habits :Veg/nonveg/smoker/Alcocoholic/Tobacco chewer

8. Family History :

GENERAL EXAMINATION

Patient consciousness :

Body Built :

Nourishment :

Anaemia :

Jaundice :

Cyanosis :

Clubbing :

JVP :

Tracheal deviation :

Pedal oedema :

Lymph adenopathy :

Vital Signs

Body Temp :

Pulse :

Respiratory rate :

Blood Pressure :

Weight :

SIDDHA ASPECT

NILAM

Kurinchi :

Mullai :

Marutham :

Neithal :

Palai :

YAAKKAI(Udal)

Vaatham :

Pittham :

Kabam :

Kalappu :

GUNAM

Satthuvam :

Rajotham :

Thamasam :

PARUVA KALAM

Kaar :

Koothir :

Munpani :

Pinpani :

Elavenil :

Muduenil :

PORI/PULANGAL (SENSORY ORGANS)

Mei –Sensation :

Vaai – Taste :

Kan – Vision :

Mooku - Smell :

Sevi – Hearing :

KANMENTHRIYAM/KANNMA VIDAYAM [MOTOR ORGANS]

Kai- Dhaanam :

Kaal-Kamanam :

Vaai-Vasanam :

Eruvaai- Visarkkam :

Karuvaai-Aanantham :

UTHKAAYA ATHAKAAYAM

Puyam[forearm] :

Sayam[arm] :

Kaal[leg] :

Paaatham[feet] :

UYIR THATHUKKAL

A.VATHAM

Piranan :

Abanan :

Viyanan :

Udanan :

Samanan :

Nagan :

Koorman :

Kirukaran :

Devathathan :

Thananjeyan :

B.PITHAM

Anar pitham :

Ranjaga pitham :

Saathaga pitham :

Pirrasaga pitham :

Alosaga pitham :

C.KAPAM

Avalambagam :

Kilethagam :

Pothagam :

Tharpagam :

Santhigam :

UDALTHAATHUKKAL

Saaram :

Senner :

Oon :

Kozhuppu :

Enbu :

Moolai :

Sukkilam/Suronitham :

ENVAGAI THERVUGAL

1.Naa :

2.Niram :

3.Mozhi :

4.Vizhi :

5.Sparisam :

6.Malam :

7.Moothiram

a)Neer Kuri :

b)Nei Kuri :

8.Naadi :

MALAM

Niram :

Edai :

Erugal :

Elagal :

MOOTHIRAM

1.Neerkuri

Niram :

Manam :

Edai :

Nurai :

Enjal :

2.Neikuri

MODERN ASPECT

Sytemic Examination

Inspection :

Palpation :

Percussion :

Auscultation :

Proctoscopy :

Others Systems

Cardio Vascular System :

Respiratory system :

Central nervous system :

Genito urinary system :

CLINICAL SIGN AND SYMPTOMS OF URATHA PITHAM

SL.No.	Signs & Symtomps	Before Treatment	After Treatment						
1.	Insomnia		7 days	14 days	21 days	28 days	35 days	42 days	49 days
2.	Giddiness								
3.	Palpitation								
4.	Head ache								
5.	Sweating								
6.	Fatigue								
7.	Visual disdurbance								

INVESTIGATION

1. BLOOD

TC

DC

ESR

Blood sugar

Blood urea

Serum cholesterol

Serum creatinine

Lipid profile

2. URINE

Albumin

Sugar

Deposits

5. DIGITAL EXAMINATION

ECG

Chest Xray

DIFFERENTIAL DIAGNOSIS

DIAGNOSIS

TRIAL DRUG

Dose:

Anubanam :

Duration of Treatment

Pathiam (Do's and Don'ts)

Prognosis at the end of the Treatment.

Medial Officr Signature: **HOD**

BIBLIOGRAPHY

BIBLIOGRPHY

1.Davidsons priciples and practice of Medicine - 21st Edition

2.High Blood Pressure (R.K.Mehra)

3.Harrison's Principles of Internal Medicine 17TH Edisons VOL1

4..Hej,Wheltonpk,Epidemiology and prevention of Hypertension, Medclin North Am 1997;81;1077-1097.

5.Primatest p,Brookers M,Poulter NR,Improved Hypertension management and control; results from the health survey for England 98, hypertension 2001.

6.P.Ramachandren Yugi vaithiya chinthamani -800, Thamarai Noolagam, Chennai- 26,Page no-144.

7.Sigitcha Rathna Deepam –PART-1-Kannusamy Pillai –Rathna Nayakar & sons-Thanjavur-Page no -285.

8.Siddha Formulary of India –Part-2.

9.International Journal of Endorsing Health Science Research Vol -2 Issue1,June 2014(Zia-Ul-Haq,2012; Hussain,2010&Imran,2012.

10 P.Ramachandren,Yugi vaithiya chinthamani ,Thamarai Noolagam, Chennai- 26, page no-133

11 I.Ponnaiah, Pararasasekaram, thirugnana sambanthar achiyanthirasaalai Noolagam, 1935 .,part-4,page no-121

12..Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Part – I, Indian Medicine and Homeopathy, Fourth Edition 2006,page no 176

13 . Dr. S. Venkatarajan L.I.M, Dhanvanthri Vaithiyam, Part- I,page no-61 Saraswathy Mahal Noolagam, Thanjavur.

14.I.Ponnaiah,Pararasasekaram,thirugnanasambantharachiyanthirasaalai Noolagam, 1935, part-1,page no-113

15 .Dr. M. Shanmugavelu, H.B.I.M .Sadhaga naadi Noi naadal noi muthal naadal part-1 Indian Medicine and Homeopathy, Fourth Edition 2006 ,page no-5

16.'Ayurveda and Siddha', Department of Scientific Industrial Research, Indian Government, Retrieved 10 Nov 2011.

17. Master Muniyar, Chillayah, Siddha therapy, natural remedies and self treatment, varma kalai, Retrieved 31 May 2013.

18. T.V. Sambasivam Pillai, Tamil – English dictionary, Volume 2, Directorate of Indian Medicine and Homeopathy, Second Edition 1991, Pg. 1219.

19.K.S. Murugesa Mudhaliyar, Siddha Materia Medica, Indian Medicine and Homeopathy,Second Edition 2006, Pg – 63. 32.68. T.V.Sambasivam pillai Tamil – English Dictionary,Vol 3, Part 2,Directorate of Indian Medicine & Homeopathy,Chennai, 1978,Pg- 234

20 Dr. M. Shanmugavelu, H.B.I.M, Noigaluku Siddha Parigaram, Part –II, Arulmigu Pazhani Dhandayudhabani Swami Thirukoil, 1976, Pg.3.

21. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Part – I, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg. 301.

22. Dr. S. Venkatarajan L.I.M, Dhanvanthri Vaithiyam, Part- II, Saraswathy Mahal Noolagam, Thanjavur, Third Edition 2006, Pg. 285.

23. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg. 255.

24. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg. 136.

25. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg. 270.

26. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg - 139.

27. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg - 91.

29. Dr. M. Shanmugavelu, H.B.I.M, Noi Nadal Noi Mudhal Nadal Thirattu, Indian Medicine and Homeopathy, Fourth Edition 2006, Pg - 173

30. I.Ponnaiah Pararasasekaram , thirugnana sambanthar achiyanthirasaalai Noolagam, 1935 part-1,page no-113

31. Dr. M. Shanmugavelu, H.B.I.M .Sadhaga naadi Noi naadal noi muthal naadal part-1, Indian Medicine and Homeopathy, Fourth Edition 2006 , page no-5

33. Dr. M. Shanmugavelu, H.B.I.M, Noi naadal noi mudhal naadal part-1, Indian Medicineand Homeopathy, Fourth Edition 2006 page no-87
34.P.Ramachandren-Yugi Vaidhya Chindhamani , Thamarai Noolagam, Chennai- 26

35.Kannusamy pillai, , chikicharathinadeepam, B.Rathinanayagarsons, 14th edition, 2014, page no: 106

36. M. Shanmugavelu, H.B.I.M, Noi Naadal noi mudhal naadal Indian Medicine and Homeopathy, Fourth Edition 2006,page no-95

37.M. Shanmugavelu, H.B.I.M, Noinaadal Noi Mudhal Naadal Indian Medicine and Homeopathy, Fourth Edition 2006page no-121

38. Dr. M. Shanmugavelu, H.B.I.M Sadhaga Naadi Noi naadal noi muthal naadal part1, Indian Medicine and Homeopathy, Fourth Edition 2006 , page no-40

39.Dr.K.S.Uthamarayan, Siddha maruthuvaanga surukkam, Indian Medicine and Homeopathy, third Edition 2006, Page no : 254 -256

40. Samy C.P.Agathiyar Gunavagadam, Malaiyappaswamy Vaithiya Salai, Palani 1973, page no-27.

41. Samy C.P.Agathiyar Gunavagadam, Malaiyappaswamy Vaithiya Salai, Palani 1973, ,page no-31.

42. S.P.Ramachandran, Agasthiyar Vaithiya Rathina Surukkam, Thaamarai Noolagam, second edition, feb 1998, page no: 61

43. Dr.S.Venkatarajan, Agathiyar 2000,Part 2, Thanjavur saraswathy mahal, 1958,Pg-5

44. Kannu Samiyam ,B.Rathinanayagarsons, 14th edition, 2014,page no-121

45. P. Ramachandren Yugi Vaidhya Cinthamani, Thamarai Noolagam, Chennai- 26

46. Samy C.P.Agathiyar Gunavagadam, Malaiyappaswamy Vaithiya Salai, Palani 1983, Pg-22.

47. Samy C.P,Agathiyar Gunavagadam part-2,Malaiyappaswamy Vaithiya Salai, Palani 1983,Pg305.

48. Pa. Kannusamipillai.sikicharathna deepam ennum vaidhiya nool B.Rathna nayakkar and sons 2011,Pg - 7

49..Kalathur Kandasamymudaliar, pathinen sitharnaadisasthiram , editon 201,page no121..

50.JR Bhardwaj,BOYD'S Textbook of Pathology,10th Edition,Volume-2.

51..Norman M.Kaplan,Clinical Hypertension,6th Edition.

52.Robbins Pathologic Basis of Disease,5th Edition.

53.K.S. Murugesa Mudhaliyar,Siddha maruthum-pothu, Indian Medicine and Homeopathy, Fourth Edition 2006,Page no: 354.

54 .BD Chaurasia's Human Anatomy volume 1 CBS publishers & Distributors pvt Ltd. Sixth Edition 2013 pg.no 281.

55.BD Chaurasia's Human Anatomy volume 1 CBS publishers & Distributors pvt Ltd. Sixth Edition 2013 pg.no 239

56. K Sembulingam, Essentials of Medical Physiology, Jaypee brothers, New delhi, Fourth Edition, 2006, Pg – 445,446.

57. K Sembulingam, Essentials of Medical Physiology, Jaypee brothers, New delhi, Fourth Edition, 2006, Pg – 448.

58. K Sembulingam, Essentials of Medical Physiology, Jaypee brothers, New delhi, Fourth Edition, 2006, Pg – 438-441.

59.T.V.Sambasivam Pillai, dictionary based on Indian medical science, Dept of Indian Medicine and Homeopathy, 2nd edition, march 1998, vol.1 , page no: 317-318.

60. .Sir Stanley Davidson , Davidson‟s principle and practice of medicine , 22nd edition, pg.811.